

## 3-13 SAFETY AND SECURITY

### Changes Since the Draft EIS/EIR

Subsequent to the release of the Draft EIS/EIR in April 2004, the Gold Line Phase II project has undergone several updates:

**Name Change:** To avoid confusion expressed about the terminology used in the Draft EIS/EIR (e.g., Phase I; Phase II, Segments 1 and 2), the proposed project is referred to in the Final EIS/EIR as the Gold Line Foothill Extension.

**Selection of a Locally Preferred Alternative and Updated Project Definition:** Following the release of the Draft EIS/EIR, the public comment period, and input from the cities along the alignment, the Construction Authority Board approved a Locally Preferred Alternative (LPA) in August 2004. This LPA included the Triple Track Alternative (2 LRT and 1 freight track) that was defined and evaluated in the Draft EIS/EIR, a station in each city, and the location of the Maintenance and Operations Facility. Segment 1 was changed to extend eastward to Azusa. A Project Definition Report (PDR) was prepared to define refined station and parking lot locations, grade crossings and two rail grade separations, and traction power substation locations. The Final EIS/EIR and engineering work that support the Final EIS/EIR are based on the project as identified in the Final PDR (March 2005), with the following modifications. Following the PDR, the Construction Authority Board approved a Revised LPA in June 2005. Between March and August 2005, station options in Arcadia and Claremont were added.

**Changes in the Discussions:** To make the Final EIS/EIR more reader-friendly, the following format and text changes have been made:

Discussion of a Transportation Systems Management (TSM) Alternative has been deleted since the LPA decision in August 2004 eliminated it as a potential preferred alternative.

Discussions of the LRT Alternatives have eliminated the breakout of the two track configurations used in the Draft EIS/EIR (Double Track and Triple Track). The Final EIS/EIR reports the impacts of a modified triple track configuration (2 LRT tracks and 1 freight track with two rail grade separations) but focuses on the phasing/geographic boundaries included in the LPA decisions.

Two LRT alternatives in the Final EIS/EIR are discussed under the general heading “Build Alternatives,” and are defined as:

1. Full Build (Pasadena to Montclair) Alternative: This alternative would extend LRT service from the existing Sierra Madre Villa Station in Pasadena through the cities of Arcadia, Monrovia, Duarte, Irwindale, Azusa, Glendora, San Dimas, La Verne, Pomona, and Claremont, terminating in Montclair. The cities from Pasadena to Azusa are also referred to in the Final EIS/EIR as Segment 1. The cities from Glendora to Montclair are also referred to in the Final EIS/EIR as Segment 2. Key changes from the Draft EIS/EIR are the inclusion of Azusa in Segment 1, the elimination of the Pacific Electric right-of-way option between Claremont and Montclair, the inclusion of a 24-acre Maintenance and Operations facility in Irwindale (the site is smaller than in the Draft EIS/EIR), and the addition of two rail grade separations. Note that the Maintenance and Operations Facility is located in Segment 1 but is part of the Full Build Alternative. In other words, it would not be constructed as an element of the Build LRT to Azusa Alternative (described below). The length of the alternative is approximately 24 miles. One station (and parking) would be located in each city, except for

- Azusa, which would have two. There are two options for the station locations in Arcadia and Claremont. Segment 1 would include 2 LRT tracks throughout and 1 freight track between the Miller Brewing Company in Irwindale and the eastern boundary of Azusa. The freight track that now exists west of Miller Brewing, which serves a single customer in Monrovia, would be removed from service following relocation of that customer by the City of Monrovia. Segment 2 would include two LRT tracks throughout and 1 freight track between the eastern boundary of Azusa and Claremont. In Claremont, the single freight track joins up with the double Metrolink tracks (which are also used for freight movement) and continues through to Montclair (and beyond). This alternative also includes two railroad grade separations (in Azusa and in Pomona) so that LRT tracks would pass above the at-grade freight track. These allow the LRT and freight services to operate independently (thus eliminating the time-constrained double track option discussed in the Draft EIS/EIR). Implementation of the alternative would include relocation of the existing freight track within the rail right-of-way, but there would be no changes in the service provided to customers. The alternative includes 8 new traction power substations in Segment 2, as well as the 8 in Segment 1.
2. Build LRT to Azusa Alternative: This alternative (also referred to as Segment 1) would extend LRT service from the existing Sierra Madre Villa Station in Pasadena through the cities of Arcadia, Monrovia, Duarte, Irwindale, and to the eastern boundary of Azusa. (The main change from the Draft EIS/EIR is the inclusion of the City of Azusa.) The length of the alternative is approximately 11 miles. One station (and parking facility) would be located in each city, except for Azusa, which would have two. There are two options for the station location in Arcadia. Segment 1 would include two LRT tracks throughout and 1 freight track between the Miller Brewing Company in Irwindale and the eastern boundary of Azusa. The freight track that now exists west of Miller Brewing, which serves a single customer in Monrovia, would be removed from service following relocation of that customer by the City of Monrovia. This alternative also includes the railroad grade separation in Azusa so that LRT tracks would pass above the at-grade freight track. This allows the LRT and freight services to operate independently (thus eliminating the time-constrained double track option discussed in the Draft EIS/EIR). Implementation of the alternative would include relocation of the existing freight track within the rail right-of-way, but there would be no changes in the service provided to customers. The alternative also includes 8 new traction power substations.

As in the Draft EIS/EIR, impact forecasts use 2025 conditions, except for traffic impacts, which reflects a 2030 forecast based on the recently adopted 2004 SCAG Regional Transportation Plan.

## Summary of Impacts

On a statistical basis, safety hazards to motorists, pedestrians, and bicyclists could increase due to increased close interactions with trains, especially at at-grade crossings.

Potential safety and security impacts during the construction period would be addressed for all alternatives through compliance with federal OSHA, state (CALOSHA), and LACMTA policies which provide for protection of workers and site visitors. Grade-crossing safety would be addressed for all rail alternatives through compliance with CPUC requirements.

Long-term safety and security impacts would be addressed for all alternatives through compliance with federal OSHA, state (CALOSHA), and LACMTA policies which provide for protection of workers and

users. Grade-crossing safety would be addressed for all rail alternatives through compliance with CPUC requirements.

## Introduction

Safety and security, as it pertains to the Gold Line Foothill Extension Project, is concerned with three general topics:

1. Accident prevention (including accidents involving vehicles, bicycles, and pedestrians; and injuries);
2. Crime prevention (including crimes against patrons and/or employees, theft, and fare evasion); and
3. Emergency response.

This section focuses on the first two topics and how there may be a potential impact on each due to the implementation of the Gold Line Foothill Extension Project. The third topic, emergency response, is addressed in Section 3-4, Community Facilities and Services.

### 3-13.1 Existing Conditions

The Federal Railroad Administration (FRA), under the umbrella of the U.S. Department of Transportation (DOT), was created by the Department of Transportation Act of 1966 (49 U.S.C. 103, Section 3[e][1]). The FRA was created primarily to promulgate and enforce rail safety regulations, administer railroad assistance programs, and conduct research and development in support of improved railroad safety and national rail transportation policy.

The FRA Office of Safety promotes and regulates safety throughout the Nation's railroad industry. It employs more than 415 federal safety inspectors and operates out of eight regional offices. FRA inspectors specialize in five safety disciplines and numerous grade crossing and trespass-prevention initiatives: *Track, Signal and Train Control, Motive Power and Equipment, Operating Practices, Hazardous Materials, and Highway-Rail Grade Crossing Safety*. The Office trains and certifies state safety inspectors to enforce federal rail safety regulations. Central to the success of the rail safety effort is the ability to understand the nature of rail-related accidents and to analyze trends in railroad safety. To do this, the Office of Safety collects rail accident/incident data from the railroads and converts this information into meaningful statistical tables, charts, and reports.

The California Public Utilities Commission (CPUC) has regulatory and safety oversight over railroads and rail transit systems in the State. The responsibility is divided among three programs within the Consumer Protections and Safety Division (CPSD): 1) Railroad Safety, 2) Highway-Rail Crossing Safety, and 3) Rail Transit Safety. The Railroad Safety Branch has safety oversight of heavy freight and passenger railroads. The CPUC coordinates with the Federal Railroad Administration (FRA) and it is the largest participating state agency in the nation to ensure that railroads comply with federal railroad safety regulations resulting from the 1970 Federal Railroad Safety Act as codified in Part 49 of the Code of Federal Regulations (CFR).

The Rail Safety and Crossings Branch is responsible for implementing the CPUC's Highway-Rail Crossing Program, which oversees the safety for all public and private highway-rail crossings in California. The CPUC authorizes construction of new at-grade highway-rail crossings and construction of underpasses or overheads. The CPUC staff reviews proposals of crossings, investigates deficiencies of warning devices or other safety features at existing at-grade crossings, and recommends engineering improvements to prevent accidents. These activities include the development and enforcement of uniform

safety standards, analyzing data for crossing closure, reviewing grade crossing warning devices, and analyzing rail accident data for the Commission's *Annual Report of Railroad Accidents Occurring in California*.

The Rail Transit Safety Branch covers light rail, rapid rail, and cable cars. The Commission's authority over transit agencies is based in state law and delegated by the FRA through CFR 49, Part 659. The Rail Transit Safety Branch is responsible for overseeing the safety of public transit guide-ways and ensures that transit agencies have and follow system safety programs that integrate safety in all facets of transit system operations.

The California Department of Transportation (Caltrans) is responsible for the design, construction, maintenance, and operation of the California State Highway System, as well as that portion of the Interstate Highway System within the state's boundaries. Alone and in partnership with Amtrak, Caltrans is also involved in the support of inter-city passenger rail service in California, and is a leader in promoting the use of alternative modes of transportation. In 1972, Assembly Bill 69 set down the current framework of Caltrans.

There are two Caltrans programs specifically designed to improve railroad safety: 1) the Caltrans Rail Safety Program and 2) the California Operation Lifesaver Program. The Caltrans Rail Safety Program focuses on vehicular and pedestrian accidents involving passenger trains financed by Caltrans. The California Operation Lifesaver Program emphasizes education on safety issues related to highway-rail crossing related accidents. A few educational programs offered by California Operation Lifesaver include the "Highways or Dieways" Campaign, which emphasizes alerting the public to the vehicle and train accidents through television public service announcements, public service radio announcements, and magazine and newspaper advertising. Pedestrian safety is the California Operation Lifesaver Program's primary priority.

The Los Angeles County Metropolitan Transit Authority (LACMTA) operates bus, light rail, and heavy rail subway service for daily passenger boarding, and owns railroad right-of-way (ROW) over which Metrolink trains are currently operating. As part of its responsibilities, the LACMTA implements its *System Safety Program Plan* to maintain and improve the safety of commuter operations, reduce costs associated with accidents, and comply with state regulations. These safety measures have been established to ensure worker and passenger safety, crime prevention, adequate emergency response, and emergency procedures to be followed in the event of a natural disaster. The LACMTA currently provides police surveillance (via contracts with the Los Angeles County Sheriff's Department [LASD]), non-uniformed police inspectors on transit buses and at major transit nodes, closed-circuit television surveillance in some locations, and an emergency radio response system.

Security, cameras, and law enforcement for LACMTA facilities is provided on a 24-hour per day, 7-day per week basis or as needed to solve specifically targeted problem areas. Criminal reports or arrests, other than those accomplished by special enforcement officers remain the jurisdiction of the local law enforcement agency where the activity occurs.

The design of existing LACMTA fixed rail facilities (including vehicles, stations, parking lots, etc.) is intended to provide a safe, secure, and comfortable transit system. Included among these features are station and platform amenities, park-and-ride lots, and security lighting. Some locations may include an Advanced Traveler Information System (ATIS), bike lockers, map cases, and ticket vending machines. Security-related design features may include emergency telephones at station platforms, public announcement (PA) systems, open sight lines, graffiti-resistant material, crosswalks, and a contract for security patrol.

The LASD Transit Police Services Bureau currently provides security services for LACMTA customers, employees, and facilities. Both special officers and deputies are assigned to LACMTA to provide law enforcement services. They provide field response to minor incidents involving LACMTA vehicles, as well as regular patrols of LACMTA property. The LASD also provides special enforcement deputies, who work both in uniform and plain clothes, depending on the type of enforcement conducted. Sheriff's are on duty during system hours of operation, with detective support ten hours per day Monday-Friday. The LASD also oversees the LACMTA Security force, which patrols LACMTA headquarters and Metro bus and rail yards, as well as an LACMTA counter-terrorism and threat assessment team.

Over the last 10 years, the LACMTA has established several transit-specific projects and programs to further enhance safety for its passengers, employees, and the community. These include:

- Photo equipment installed on vehicles to permit live video surveillance and recording.
- Direct communication between drivers and the LASD Transit Dispatch/Emergency Response Center.
- The Transit Safety Awareness Program, which communicates safety information to motorists and pedestrians through transit user aids, bus stop information signs, and the Internet.
- The "Safety Begins With Me" Campaign, which promotes safety around Metro trains and buses by placing newspaper and outdoor advertisements urging safety and by supporting a community safety outreach program designed to remind citizens of their responsibility and awareness of their own safety when riding LACMTA rail and buses.
- The "Metro Experience" mobile safety-theater, which educates the public about rail safety through the use of advanced video and 3-D effects to simulate the true operation of a Metro train. It provides an opportunity to make a compelling and lasting impression on children and adults about rail safety.
- LACMTA's Injury and Illness Prevention Program, which addresses workplace safety procedures, communication with employees on health and safety issues, identification and resolution of unsafe conditions, procedures for investigating workplace injuries and illnesses, and occupational health and safety training.
- Community Emergency Response Training (CERT) in collaboration with the Los Angeles City Fire Department (LACFD), in which employees are trained in earthquake awareness, disaster medical procedures, and rescue operations.

Due to the implementation of these programs by the LACMTA, workplace accidents have decreased significantly. In 2003, the total new worker's compensation claims per 100 employees decreased 31 percent from 2002 levels; the number of lost workdays decreased by 14.4 percent. In addition, public liability/property damage claims also fell within all five Metro Service Sector areas and on Metro Rail lines by 18.3 percent between 2002 and 2003. Similar claims for Metro Rail only decreased by 27.6 percent and LACMTA's total public liability/property damage expenses decreased by 46.7 percent.

Also, in an effort to reduce the number of "S-turns," in which motorists use open traffic lanes to drive around closed traffic gates, the LACMTA plans to install four gates, rather than the conventional two at historically accident-prone at-grade crossings. This program applies to the Metro Blue Line (MBL) and Metro Gold Line Phase I and would also apply to the Foothill Extension. LACMTA attributes most accidents involving MBL trains/motor vehicles with a growing number of motorists making illegal left turns into the path of the train along streets where the rail line runs down the middle of the street. The four-gate intersection is designed to prevent illegal left turns.

~~LACMTA authorities consistently argue that they believe the large number of deaths and injuries on the MBL is caused by the risky behavior of pedestrians and motorists, who flout traffic laws and warning~~

~~signals as they cross in front of trains. LACMTA investigations have held victims to be at fault in all cases.~~

~~However, another possible cause for a number of these accidents may be due to an optical effect in which larger objects in motion appear to be moving more slowly than they really are traveling. In other words, people misestimate the speed of trains. In addition, the problem is compounded by the fact that when a motorist looks down the track at an intersection, they see the tracks as converging in the distance at the vanishing point rather than parallel. It is thought that motorists learn to associate that apparent convergence with distance and, therefore, we are likely to assume that the trains are farther away. In response to this new perspective about at grade accidents, it would behoove the LACMTA to proactively explore options that would educate the public about this hidden optical danger when at grade crossings.~~

~~In response to the alarming number of train/motor vehicle and train/pedestrian accidents that have occurred on the MBL from Los Angeles to Long Beach,~~

LACMTA adopted the MBL Grade Crossing Safety Improvement Program. This Program is designed to reduce the number of accidents and enhance public safety at the crossings and includes engineering, enforcement, education, and legislation to effectuate this improvement. Specifically, this Program:

- Established a traffic detail with the LASD for increased enforcement of traffic violations at MBL at-grade crossings. In a 90-day trial span, traffic detail deputies wrote 7,760 citations. During the length of the detail, deputies have written over 14,000 citations.
- Installed photo enforcement cameras to photograph motorists driving under or around railroad crossing gates. Two photographs, one of the vehicle's license plate and the other of the driver's face, are taken as the basis for issuing a citation. The camera equipment is mounted in a 12-foot high bullet-resistant cabinet.

The result of these efforts was a 92 percent reduction in the number of violations occurring at the at-grade crossings. The success of the LASD's enforcement and photo enforcement programs at the LACMTA indicates that these same programs can be applied to any urban LRT that has at-grade railroad crossings.

~~Input on safety and security issues has been obtained from LACMTA staff members who developed considerable expertise in dealing with many of the safety and security impacts expected to result from construction and operation of light rail on the surface and in the subway.~~

Pedestrian and transit patron safety and the safety of train operation is a major concern especially with the presence of trains operating on city streets, particularly the number of trains running during weekday peak hours. In response to these concerns, an estimate of the possible number LRT accidents that might be expected in the Foothill Extension Corridor was made using MBL data from CPUC's *Annual Report of Railroad Accidents Occurring in California, 1999*. The decision to use MBL data to estimate Gold Line Foothill Extension potential accidents stems from the similarities between MBL and Gold Line Foothill Extension in that both will run through dense urban environments with numerous at-grade crossings and that heavy freight trains may use the tracks alongside LRT.

Most train accidents fall into the categories of railroad-only accidents and accidents at at-grade crossings. Railroad-only accident causes include human error, equipment failure, and track failure. At-grade crossing accidents are caused by vehicles or pedestrians unsuccessfully crossing before the train passes through. The types of accidents related to these causes are derailments, head-on collisions, and rear-end collisions. All accidents are a concern to the railroads and the public; however, train derailments are of special concern in the event that the train is carrying hazardous materials.

According to CPUC’s report, MBL accidents occurred at a rate of 2.41 accidents per 100,000 train miles in California from 1990 to 1999. The average annual mileage for the MBL over the same timeframe is 1.46 million train miles. Therefore, 35.19 accidents per year occurred on the MBL and it is estimated that the same annual accident rate will occur for Gold Line Foothill Extension. In addition, the casualty rate for the MBL over the same timeframe is 1.36 casualties per 100,000 train miles and, therefore, 19.86 casualties per year occurred on the MBL and it is likely that the same annual casualty rate will occur for Gold Line Foothill Extension.

In 1999, a record 50 train accidents occurred on the MBL. Of this number, 39 involved motor vehicles, eight involved pedestrians, and two involved other (e.g. while boarding). Of these 50 accidents, 10 people were killed and 40 people were injured. Of all other LRT agencies in California in 1999, the MBL total number of accidents accounts for 34.8 percent of the total accidents for all agencies. This percentage is significantly disproportionate from other California agencies. However, motorists who made an illegal left turn into the path of the train caused 32 of the total 50 accidents. Motorists running a light or stop sign caused another three accidents and motorists running the gate caused two more accidents. Another two accidents occurred by other means including those involving motor vehicles at locations other than at at-grade crossings. A majority of these accidents could have been prevented if four-gate at-grade crossings were installed at high-risk intersections to reduce the number of illegal left turns by impatient or confused motorists. Also, the use of and well-maintained and demarcated pedestrian crosswalks and large, clearly written, and bilingual instructional signs would reduce the number of confused pedestrians around at-grade crossings. Four-quadrant gates are a design standard for the Foothill Extension project. All pedestrian crosswalks will be designed in accordance with CPUC and LACMTA requirements.

The analysis of security issues focuses on the potential for violent crimes, property theft, fare evasion, and vandalism. This analysis reviews project design features in the context of LACMTA procedures and prior experience of other rail systems to assess impacts. The LASD Transit Services Bureau crime data related to LACMTA operations are examined. The statistics compiled by the Transit Services Bureau for 1999 through 2001 is shown in **Table 3-13.1**.

<b>Crime</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
Total (sans Vandalism)	391	509	409
Homicide	0	1	0
Forcible Rape	2	1	4
Robbery	67	63	83
Aggravated Assault	78	152	35
Burglary	10	13	4
Larceny Theft	163	187	190
Grand Theft Auto	69	91	93
Arson	2	1	0
Vandalism	371	NA	560

Source: LASD Transit Services Bureau 1999, 2000, 2001; Myra L. Frank, 2003.

Of these crimes, robbery, aggravated assault, larceny theft, grand theft auto, and vandalism appear to have the greatest incidence on LACMTA property. The analysis of the chapter will focus on the potential for crimes against persons, property theft, and vandalism.

Station and track design (i.e., access, layout, exits, alarms, evacuation) and operational procedures (i.e., interagency agreement, training, evacuation) are pertinent to the effectiveness and timeliness of emergency response. A more in-depth discussion about emergency response during construction and operation of the proposed project can be found in Chapter 3-4 of this document.

Police protection services in the proposed corridor are provided by a combination of individual city police departments and the LASD. Individual city police departments serve the Cities of Arcadia, Azusa, Claremont, Glendora, Irwindale, La Verne, Monrovia, Montclair, Pasadena, and Upland. The Cities of Bradbury, Duarte, Pomona, San Dimas, and the unincorporated portions of Los Angeles County are served by the LASD. There are two LASD Bureaus serving the proposed corridor including the Temple Bureau and the San Dimas Bureau. There are nine county and city police stations located within 1 mile of the proposed alignment.

Fire protection services in the proposed corridor are provided by a combination of individual city fire departments and the Los Angeles County Fire Department (LACOFD). The Cities of Arcadia, La Verne, Monrovia, Pasadena, and Sierra Madre are served by their individual city fire departments. The Cities of Azusa, Claremont, Duarte, Glendora, Irwindale, Pomona, San Dimas, and the unincorporated portions of Los Angeles County are served by the LACOFD. The proposed corridor is located within the service area of LACOFD Battalions 2, 15, and 16. There are 16 city and county fire stations located within 1 mile of the proposed alignment.

Each City's General Plan was reviewed to see if anything specific was detailed about safety and security concerning railroads. The results of this inquiry yielded these mandates about railroad safety and security, and safety and security in general, contained within the General Plans:

- The City of Arcadia's General Plan mandates that "where there is a potential for impacts on security or law enforcement services, involve Police personnel in the development review process by referring development requests to the Police Department for review and comment." Also, the Plan recommends "integrating crime prevention concepts in to the design and construction of new development."
- The City of Pasadena's General Plan mandates "maintenance and expansion of the level of law enforcement activities required to achieve a reduction in the crime rate" and "to seek citizen involvement in the development of crime prevention and control programs."
- The City of Monrovia's General Plan specifically mandates that the City "provide for safe operations of rail service, truck/auto/bus traffic, pedestrians, bicycles, and other modes by adhering to state and national standards and uniform practices." The Plan also states that the City will "continue improvements for safe and efficient designs to minimize the impact of at-grade arterial railroad crossings."
- The City of La Verne's General Plan also specifically mandates that the city will "conduct a survey of traffic accidents to identify dangerous intersections and railroad grade crossings (both existing and proposed) and develop improvements for identified intersections." The Plan also decrees that the City will "educate our residents so that they can protect themselves against avoidable accidents," "patrol our neighborhoods for dangerous activity," and "provide a fully staffed and properly equipped Police and Fire force." In addition, the plan states that the city will "continue to fund Neighborhood



Watch and Business Watch programs” and will “apply standards for defensible space as part of the city design review process.”

- The City of Pomona’s General Plan states “traffic safety is also an important consideration when rail lines cross public streets. Grade separated crossings have been used at major rail crossings in the central-core area and have greatly improved traffic circulation and safety there.”
- The City of Claremont’s General Plan mandates that “the City shall encourage the use of design concepts facilitating defensible space and other means of inhibiting crime.”
- Scoping meetings were held with the various cities that the proposed Gold Line Foothill Extension will travel through or in close proximity to and questionnaires about their concerns regarding various potential impacts were distributed to proper city representatives. These inquiries yielded the concerns about safety and security shown in Table 3-13.2.

<b>TABLE 3-13.2 CORRIDOR CITIES’ INITIAL CONCERNS REGARDING GOLD LINE FOOTHILL EXTENSION EFFECTS ON SAFETY AND SECURITY</b>	
<b>City</b>	<b>Comments</b>
Arcadia	Parking lot security; safety of passengers and employees to and from personal vehicles; assurances of emergency vehicle access during and after construction; protection and maintenance of and access to fire hydrants
Azusa	None
Claremont	Effects on emergency response times
Duarte	None
Glendora	None
Irwindale	None
La Verne	Train/pedestrian, train/bicycle, and train/motor vehicle interactions at crossings and elsewhere; affects on emergency response times
Monrovia	Train/pedestrian interaction at stations and crossings; safety fencing along ROW
Montclair	Effects on emergency response times
Pomona	None
San Dimas	None
South Pasadena	Train/pedestrian and train/school children interactions (City has schools in close proximity to crossings); effects on emergency response times
Source Jones & Stokes, 2003.	

Based on this initial scoping, most of the concerns from the various cities revolve around issues of: (1) accident prevention, (2) crime prevention, and (3) emergency response. The impacts and mitigation sections of this chapter focus primarily on accident and crime prevention. Chapter 3-4 of this document addresses emergency response.

## 3-13.2 Environmental Impacts

### 3-13.2.1 Evaluation Methodology

The No Build alternative was compared with the Build Alternatives. The assessment of safety and security issues addresses accident prevention and crime prevention with regard to both construction and operations in the immediate and long-term timeframes. The cumulative impacts of both construction and operations will also be discussed for each alternative as well as for the immediate and long-term effects of impacts addressed by regulatory compliance. The project would have an adverse impact under the National Environmental Policy Act (NEPA)/a significant impact under the California Environmental Quality Act (CEQA) if it unduly exposes the public to increased danger from accidents or exposes the public to crime.

~~Safety and security impact and mitigation analysis of the Build Alternative will not address specific differences between the options except to note here that any alternative with continuing freight operations or with more tracks constructed will likely result in more total accidents than alternatives without continuing freight operations or with less or no new tracks constructed. Therefore, the potential for increased total accidents from least to greatest is the LRT, Double Track alternative with no freight operations; the LRT, Double Track alternative with freight operations; and the LRT, Triple Track alternative for all alternatives that will construct new track and may have freight operations.~~

Accident prevention analysis addresses accidents resulting from operation of project alternatives. Safety issues to be considered include the potential for train/motor vehicle, train/pedestrian, and other types of accidents. Accidents can occur at park-and-ride lots, at-grade crossings, stations or waiting platforms, or on the ROW. Accident prevention also relates to train maintenance, as well as station and track design (i.e., lighting, fencing, signage, surface and material, control devices, etc.).

Crime prevention addresses crimes against persons or property potentially occurring during operation of the proposed project. Crime prevention measures are typically implemented to manage this potential risk through station and track design (i.e., layout, lighting, sight lines) and operational procedures including security along the track, at park-and-ride lots, stations, and graffiti removal.

Local crime statistics, project design features, LACMTA procedures, and safety records have been reviewed. The analysis focuses on the potential for crimes against persons, property theft, and vandalism.

### 3-13.2.2 Impact Criteria

#### *a. NEPA Impact Criteria*

NEPA regulations require federal agencies to study the proposed action's effects on the quality of the human environment; however, NEPA does not mandate that these effects be mitigated. NEPA defines the human environment broadly, and includes an assessment of the effects to many different aspects of the natural environment, built environment, and human health. Federal agencies must also discuss economic and social effects if these effects are interrelated with effects of the natural or physical environment. Direct effects are caused by the proposed action and occur at the same time and place as the action. Direct effects typically arise from construction activities associated with the proposed action or alternatives. Indirect effects are reasonably foreseeable effects caused by the proposed action or alternatives, but occur later in time or are further removed from the project site than direct effects. Cumulative effects result from the proposed action's incremental impacts when these impacts are added

to impacts of other past, present, and reasonably foreseeable future actions, regardless of the agency or person who undertakes them.

The following qualitative thresholds of significance for safety and security of the Gold Line Foothill Extension Project will be adopted to determine if impacts from the construction and operation of the proposed project are an adverse impact under NEPA. The proposed project impacts would be adverse if it:

1. Causes safety hazards to motorists, especially at grade crossings. For purposes of this discussion, a safety hazard will be defined as any action that increases the likelihood of accidents.
2. Causes safety hazards to pedestrians and bicyclists, especially at grade crossings.
3. Causes increased railroad-only accidents (e.g. derailments); and/or
4. Causes increased crime incidences within the proposed project site or in adjacent areas from the project site.

For the discussion of impacts below, impacts will be considered if they potentially cause notable increases in safety hazards to motor vehicles, pedestrians, or bicyclists, railroad-only accidents, and/or crime incidences. The mitigation section below will discuss possible measures to reduce adverse impacts discussed to less than adverse levels.

*b. CEQA Impact Criteria*

CEQA does not require discussion of safety and security issues. Therefore, there are no CEQA impact criteria for safety and security.

### 3-13.2.3 Construction-Period Impacts

*a. No Build Alternative*

#### Phase I – The Cities Affected and the Effects

The cities in Phase I are Los Angeles, South Pasadena and Pasadena. The projects in the No Build Alternative that could affect safety and security in these cities are completion and service on the Eastside LRT Extension, implementation of increased service on Phase I of the Gold Line LRT, and countywide bus service improvements.

The Eastside LRT Extension has the greatest potential for construction period safety and security impacts due to the magnitude and complexity of construction. The environmental document prepared for the project did not identify adverse construction period impacts when the practices codified in federal OSHA, CALOSHA, and LACTMA policies and regulations are applied. Construction of other No Build projects would also be conducted in accordance with these policies and regulations and would not result in adverse construction period impacts under NEPA.

#### Foothill Extension Segment 1 – The Cities Affected and the Effects

The cities in Foothill Extension Segment 1 are Pasadena, Arcadia, Monrovia, Duarte, Irwindale, and Azusa. The No-Build alternative would maintain the current LACMTA and Foothill Transit routes in the study corridor. Current requirements for construction of any LACMTA and Foothill Transit facilities that

might be required, such as additional or larger bus stops, would be employed. Construction impacts would be less than adverse impact under NEPA.

## Foothill Extension Segment 2 – The Cities Affected and the Effects

The cities in Foothill Extension Segment 2 are Glendora, San Dimas, LaVerne, Pomona, Claremont, Montclair and Upland. The No-Build alternative would maintain the current LACMTA and Foothill Transit routes and services in the study corridor. Construction period impacts would be less than adverse, as discussed under Foothill Extension Segment 1 cities.

### *b. Build Alternatives*

During the construction phase of the Build Alternatives, safety hazards to motorists, pedestrians, and bicyclists will probably increase due to the number and proximity of vehicles and people adjacent to the construction of LACMTA facilities and ROW improvements; this is potentially an adverse impact.

Increases in railroad-only accidents along the proposed corridor will not occur during the construction of the proposed project, as there will be no trains on the tracks. This is not an adverse/significant impact. Along the existing Phase I corridor, increases greater than the current baseline potential for railroad-only accidents will likely not occur; this is also not an adverse impact.

Crime incidences adjacent to the proposed project site are not likely to increase due to the construction of the proposed alternative. However, increases in incidences may occur within the construction site (i.e. theft of construction machinery and materials); this is potentially an adverse impact.

## Phase I – The Cities Affected and the Effects

Construction of the proposed Foothill Extension would not have an adverse impact on public safety and security within Phase I cities since there are no Foothill Extension elements in those cities. Railroad-only accidents will likely not increase during construction of the Foothill Extension corridor in comparison to the current baseline potential for railroad-only accidents ~~within the Phase I corridor or in that portion of the Foothill Extension where freight is now in operation.~~ This lack on increase would be due to the fact the construction would take place under the strict rules of the Construction Authority, BNSF, FRA and CPCU regarding construction work zones. Crime incidences in areas adjacent to the Phase I corridor will not likely increase during construction of the Foothill Extension corridor in comparison to the current baseline potential for crime adjacent to the Phase I corridor.

## Foothill Extension Segment 1 – The Cities Affected and the Effects

Construction of the proposed Build Alternative could have temporary adverse impacts on public safety and security within Foothill Extension Segment 1 cities. During the construction phase, safety hazards to motorists, pedestrians, and bicyclists could increase due to the number and proximity of vehicles and people adjacent to the construction of facilities and ROW improvements. The potential for safety and security adverse impacts would be tempered by compliance with safety and security programs of OSHA, CALOSHA and LACMTA, which are designed to reduce potential impacts during construction to less than adverse levels.

Increases in railroad-only accidents will not occur during the construction of the proposed project in Foothill Extension Segment 1 cities, as there will be no additional trains on the tracks. Crime incidences adjacent to the proposed project site are not likely to increase due to the construction within Foothill Extension Segment 1 cities. However, increases in incidences may occur within the construction site (i.e.,

theft of construction machinery and materials). This is a potentially adverse effect that would be minimized by typical site security practices used by contractors.

## Foothill Extension Segment 2 – The Cities Affected and the Effects

See Section 3-13.2.3.c, Foothill Extension Segment 1, above.

## Summary of Impacts for Full Build (Pasadena to Montclair) Alternative

Construction in Foothill Extension Segments 1 and 2 would not have an adverse impact on safety and security since construction would be implemented in accordance with regulations and policies that have been developed to assure worker and public safety and security during construction.

## Summary of Impacts for Build LRT to Azusa Alternative

Impacts in Foothill Extension Segment 1 would be the same as for the Full Build (Pasadena to Montclair) Alternative above.

## Long-Term Impacts

### *a. No Build Alternative*

## Phase I – The Cities Affected and the Effects

Operation of the Eastside LRT Extension and increased service in Phase I of the Gold Line would place incremental increased demands for implementation of the safety and security programs identified in Section 3-13.1. There is a statistical possibility of increased rail-only accidents due to the introduction of new service on the Eastside LRT Extension and increased service of Phase I of the Gold Line.

## Foothill Extension Segment 1 – The Cities Affected and the Effects

The No-Build alternative would maintain current LACMTA and Foothill Transit routes, and increased LRT frequency of service as a result of LACMTA's planned service changes following construction of the Eastside Extension. As ridership on these routes increases, there would be incremental increased demands for implementation of the safety and security programs identified in Section 3-13.1. These safety programs would be provided at stations, parking areas, and on LRT vehicles. There is a statistical possibility of increased rail-only accidents within the Phase I cities due to increased service of Phase I of the Gold Line.

## Foothill Extension Segment 2 – The Cities Affected and the Effects

The No-Build alternative would maintain current LACMTA and Foothill Transit routes and increased LRT frequency of service as a result of LACMTA's planned service changes following construction of the Eastside Extension. As ridership on these routes increases, there would incremental increased demands for implementation of the safety and security programs identified in Section 3-13.1. These safety programs would be provided at stations, parking areas, and on LRT vehicles. There is a statistical possibility of increased rail-only accidents within the Phase I cities due to increased service of Phase I of the Gold Line.

### *Build Alternatives*

During the operational phase of the Build Alternatives, on a statistical basis, safety hazards to motorists, pedestrians, and bicyclists could increase due to increased close interactions with trains, especially at at-grade crossings. The statistical increase is largely driven by the comparison of new, frequent LRT service through at-grade crossings, compared to very infrequent freight rail service. This increase would be a potentially adverse impact.

Increases in railroad-only accidents also could occur during the operation of the proposed project, again driven by the by the comparison of new, frequent LRT service through at-grade crossings, compared to very infrequent freight rail service. This increase would be a potentially an adverse impact.

In Phase I cities, increases in frequency of LRT service is driven by implementation of the Eastside LRT Extension. As the frequency of service increases over that of current Gold Line Phase I operations, on a statistical basis, safety hazards to motorists, pedestrians, and bicyclists could increase due to increased close interactions with trains, especially at at-grade crossings.

### Summary of Impacts for Full Build (Pasadena to Montclair) Alternative

Operation of the Full Build Alternative could have an adverse impact on safety of motorists, pedestrians, and bicyclists within Foothill Extension Segment 1 and 2 cities due to both the increased frequency of LRT trains passing through the cites, and the concurrent operation of freight service on the third track. There is a statistical possibility of increased rail-only accidents within cities due to more frequent or new LRT service. There would be little likelihood of accidents involving LRT and freight trains, since they would operate on separate tracks.

### Summary of Impacts for Build LRT to Azusa Alternative

The statistical possibility of impacts for Segment 1 cities would be the similar as identified above for the Full Build (Pasadena to Montclair) Alternative, except that there would be a lower statistical probability of accidents in Pasadena, Arcadia and in Monrovia to the west of the proposed station since the freight tracks would end near the ~~Monrovia station~~ Maintenance and Operations Facility in Irwindale.

### 3-13.2.5 Cumulative Impacts

The Southern California Association of Governments' (SCAG) 2004 Regional Transportation Plan (RTP) Final Program EIR is the most applicable certified planning document that provides a regional cumulative impact assessment for transportation improvements (including the proposed project) through the year 2030. The proposed project, along with other transportation improvements contemplated within the framework of SCAG's 2004 RTP, would contribute to the overall intensity of development within the SCAG region. While crime could reasonably be expected to increase at current ratios of crimes to total population, safety and security measures and peace officer to population ratios could likewise reasonably be expected to keep pace. Additionally, there is nothing inherent to the regional transportation plan or any of its specific projects, modes or routes that would reasonably be expected to contribute to significant cumulative impacts.

### 3-13.2.6 Impacts Addressed by Regulatory Compliance

#### *a. Construction Period Impacts*

Impacts that would arise from construction of any of the alternatives were identified in Section 3-13.2.3, above. Elimination or reduction of these construction period impacts would occur through two steps, as follows: 1) compliance with local, state or federal regulations or permits that have been developed by agencies to manage construction impacts, to meet legally established environmental impact criteria or thresholds, and/or to ensure that actions occurring under agency approvals or permits are in compliance with laws and policies and 2) implementation of the proposed alternatives with additional construction period mitigation measures defined in Section 13-3.1. Following is a discussion of the construction period impacts for each of the alternatives that would be addressed by the first step, regulatory compliance.

Potential safety and security impacts during the construction period would be addressed for all alternatives through compliance with federal OSHA, state (CALOSHA), and LACMTA policies which provide for protection of workers and site visitors. Grade-crossing safety would be addressed for all rail alternatives through compliance with CPUC requirements. On a statistical basis, safety hazards to motorists, pedestrians, and bicyclists could increase due to increased close interactions with trains, especially at at-grade crossings.

#### *b. Long-Term Impacts*

Long-term impacts associated with of the alternatives were identified above in Section 3-13.2.4. Elimination or reduction of these long-term impacts would occur through two steps, as follows: 1) compliance with local, state or federal regulations or permits that have been developed by agencies to manage construction impacts, to meet legally established environmental impact criteria or thresholds, and/or to ensure that actions occurring under agency approvals or permits are in compliance with laws and policies and 2) implementation of the proposed alternatives with additional mitigation measures defined in Section 13-3.2. Following is a discussion of the long-term impacts for each of the alternatives that would be addressed by the first step, regulatory compliance.

Long term safety and security impacts would be addressed for all alternatives through compliance with federal OSHA, state (CALOSHA), and LACMTA policies which provide for protection of workers and users, as well as the programs outlined in Section 3-13.1. Grade-crossing safety would be addressed for all rail alternatives through compliance with CPUC requirements.

### 3-13.3 Mitigation

#### 3-13.3.1 Construction-Period Mitigation Measures

Construction of any of the alternatives would be conducted in accordance with OSHA, state (CALOSHA), and LACMTA policies and practices. These practices have been shown to reduce potential impacts to less than adverse/ less than significant. No additional mitigation measures are required for the No Build Alternative or LRT Build Alternatives.

### 3-13.3.2 Long-Term Mitigation

Operation of any of the alternatives would be conducted in accordance with OSHA, state (CALOSHA), CPUC, and LACMTA policies and practices. These practices have been shown to reduce potential impacts to less than adverse under NEPA/ less than significant under CEQA. No additional safety and security mitigation measures are required for the No Build Alternative or LRT Build Alternatives.

### 3-13.4 Impacts After Mitigation

#### 3-13.4.1 Construction Period

Construction period impacts would be eliminated or reduced to a less than adverse level by complying with the local, state, and/or federal regulatory requirements discussed in Section 3-13.2.6. These regulatory requirements are sufficient to reduce safety and security construction period impacts to less than adverse under NEPA and no additional measures are required. Construction period impacts would be not adverse under NEPA for all alternatives.

#### 3-13.4.2 Long-Term Impacts

Long term impacts would be eliminated or reduced to a less than adverse level by complying with the local, state, and/or federal regulatory requirements discussed in Section 3-13.2.6 and no additional measures to mitigate impacts to safety and security are required for any of the alternatives.