



WESTSIDE SUBWAY EXTENSION PROJECT

Addendum to the Safety and Security Hazards and Threat Assessment Technical Report



August 2011



SUMMARY

On October 28, 2010, the Metro Board selected the Westwood/VA Hospital Extension (Alternative 2 in the Draft EIS/EIR) as the Locally Preferred Alternative (LPA) and authorized the preparation of the *Westside Subway Extension Final EIS/EIR* (the Final EIS/EIR) to analyze the LPA. This alternative will extend heavy rail transit (HRT), in subway, approximately nine-miles from the existing Metro Purple Line Wilshire/Western Station to a Westwood/VA Hospital Station. A detailed description of the LPA is provided in Chapter 2 of the Final EIS/EIR.

This addendum supplements materials in the *Westside Subway Extension Project Safety and Security Hazards and Threat Assessment Technical Report* (the Report) dated August 2010 and supports the Final EIS/EIR. The LPA is referred to as Alternative 2 in this addendum and the Report. Modifications to the Report incorporated into this addendum reflect responses to comments on the Draft EIS/EIR and refinements to Alternative 2 as described in Chapter 2 of the Final EIS/EIR.

1.0 INTRODUCTION

No Change.

2.0 PROJECT DESCRIPTION

Change The Project description has been refined as part of the Final EIS/EIR.

On October 28, 2010, the Metro Board selected the Westwood/VA Hospital Extension (Alternative 2 in the Draft EIS/EIR) as the Locally Preferred Alternative (LPA) and authorized the preparation of the *Westside Subway Extension Final EIS/EIR* (the Final EIS/EIR) to analyze the LPA. This alternative would extend HRT, in subway, approximately nine-miles from the existing Metro Purple Line Wilshire/Western Station to a Westwood/VA Hospital Station. The extension would include a total of seven new stations:

- Wilshire/La Brea
- Wilshire/Fairfax
- Wilshire/La Cienega
- Wilshire/Rodeo
- Century City (Century City Santa Monica or Century City Constellation)
- Westwood/UCLA (Westwood/UCLA On-Street or Westwood/UCLA Off-Street)
- Westwood/VA Hospital (Westwood/VA Hospital South or Westwood/VA Hospital North)

The estimated one-way running time for the project would be approximately 15 minutes from the Wilshire/Western Station to the Westwood/VA Hospital Station. The extension would operate at headways of 4 minutes during peak periods and 10

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minutes during off-peak periods. As part of the project, Metro is also planning several enhancements to the Division 20 Maintenance and Storage Facility.

The construction schedule for the Project is partially dependent on the timing of Federal funding availability. Two LPA construction scenarios are considered. Both scenarios will contain the same elements with differences only in the timing of when they are built and operational. The first construction scenario assumes that under the America Fast Forward (30/10) Scenario (Concurrent Construction), the LPA would open in its entirety to the Westwood/VA Hospital Station in 2022 with the three construction segments built concurrently (Wilshire/Western to Wilshire/La Cienega, Wilshire/La Cienega to Century City and Century City to Westwood/VA Hospital). The second construction scenario assumes that under the Metro Long Range Transportation Plan (LRTP) Scenario (Phased Construction), the LPA would open in three consecutive phases (Phase 1 to Wilshire/La Cienega, Phase 2 to Century City, and Phase 3 to Westwood/VA Hospital), with the entire LPA operational to the Westwood/VA Hospital Station in 2036.

A detailed description of the LPA is provided in Chapter 2 of the Final EIS/EIR.

3.0 REGULATORY FRAMEWORK

No Change.

4.0 ANALYSIS METHODOLOGY

No Change.

5.0 EXISTING CONDITIONS/AFFECTED ENVIRONMENT

No Change.

6.0 ENVIRONMENTAL IMPACT/ENVIRONMENTAL CONSEQUENCES

Change The following is a modification of and replaces Section 6.1.1.3

Wilshire Boulevard, Wilshire/Santa Monica Boulevard and MOS Alternatives

The build alternatives are all underground heavy rail transit systems. Once the passengers enter the system they may be exposed to safety hazards which can be divided into the following areas.

- Fire/Life Safety – Hazards resulting in accidents involving injuries, fatality, or property damage due to fire, smoke, explosion, or toxic due to these causes.
- System Safety – Hazards resulting in accidents involving injuries, fatality, or property damage due to system design, equipment operations and maintenance, testing, and material selection.



Presence of any of the hazards in the above categories cannot be completely eliminated. However, the impact on passenger safety with the implementation of a well designed system safety and fire/life safety program will further ensure that the risks are minimized. Such a system will be similar to that already in place by Metro in the Red and Purple Lines. Station and tunnel design will be in accordance with the California Building Code (CBC) and Metro fire/life safety criteria.

Change The following is a modification of and replaces Section 6.1.3.3

Wilshire Boulevard, Wilshire/Santa Monica Boulevard and MOS Alternatives

Safety of construction workers and the general public will be a key element of construction activities associated with all Build Alternatives. Construction effects will be temporary and limited in area as construction proceeds along the length of the project alignment. Introduction of significant pieces of on-site construction equipment, and trucks hauling excavated material from dirt and soil removal sites on local roads will create potential safety hazards for pedestrians, bicyclists, bus riders and motorists because of the number and proximity of vehicles and people adjacent to the construction facilities. In addition, numerous construction workers operating or working in concert with equipment at the various surface construction locations, and underground in tunnel bores, will also create increased opportunities for safety breaches. Construction will be conducted in accordance with OSHA, CALOSHA, CPUC, and Metro policies and practices. A Construction Safety and Security Plan will be implemented to avoid and minimize impacts related to construction safety. No adverse impacts are anticipated under any of the Build Alternatives.

Change The following is a modification of and replaces Section 6.1.5.3

Wilshire Boulevard, Wilshire/Santa Monica Boulevard and MOS Alternatives

All alternatives will be a heavy rail transit (HRT) underground system. Such a system typically consists of the following major project elements/activities which have a potential risk of fire and related hazards:

- Station facilities
- Underground Guideway (Tunnels)
- Construction
- Passenger Vehicles
- Maintenance and Storage Facility
- Rail Operations Center

The listed elements carry electrical equipment and/or combustible materials and introduce a risk of potential fire and adverse impact on the safety of workers and patrons using the system. While the



risk cannot be completely eliminated, the implementation of Metro's system safety and fire/life safety programs will further ensure that the risk is minimized.

Change The following is a modification of and replaces Section 6.2.1.3

Wilshire Boulevard, Wilshire/Santa Monica Boulevard and MOS Alternatives

All of the Build Alternatives are located in one or more of the following law enforcement department jurisdictions.

- Beverly Hills Police Department
- Santa Monica Police Department
- West Hollywood Police Department
- Los Angeles Police Department
- Los Angeles Sheriff's Department
- Federal Protective Service

An adverse impact to law enforcement services located along the selected alternatives could potentially occur if there is a rise in criminal activity due to an increase in pedestrian circulation in the areas near at-grade station portals and sub grade stations. Another adverse impact to law enforcement services will be that criminal activity could travel by rail throughout the system from one station to another with peak volumes of circulation during high demand hours. In some cases, however, increased foot traffic around station areas could deter criminal activity.

Metro's facility design requirements provide for natural surveillance, natural access control, and territoriality principles associated with crime prevention through environmental design that are implemented in facility designs to monitor and minimize criminal activity. Similar to the Red and Purple Lines, Metro will implement security features, including lighting, communication devices (e.g., passenger telephones), closed circuit television, signs and other design features, and law enforcement officers to reduce criminal activities. No adverse impacts are anticipated under any of the Build Alternatives.

Change The following is a modification of and replaces Section 6.2.2.3

Wilshire Boulevard, Wilshire/Santa Monica Boulevard and MOS Alternatives

All of the Build Alternatives are located in one or more of the following law enforcement department jurisdictions.

- Beverly Hills Police Department
- Santa Monica Police Department
- West Hollywood contracted out to Los Angeles County Sheriff's Department



- Los Angeles Police Department
- Los Angeles Sheriff's Department
- UCLA Campus Police
- VA Hospital Campus Police
- FPS

Mass transit systems could be a target for terrorists due to their large ridership and the potential to inflict mass casualties and cause significant damage or disrupt critical infrastructures. An impact to law enforcement agencies located along the selected alternatives could occur from a potential terrorist threat targeting the increase in pedestrian circulation and critical infrastructures at or near the station portals and below ground station platforms.

7.0 MITIGATION MEASURES

Change The following is a modification of and replaces Section 7.0

Measures are summarized below for each adverse potential impact identified in Section 6.0. These measures further describe those Metro currently uses or will implement to further ensure that there are no adverse impacts.

SS-1 Implement public safety awareness and employee training program

As a policy Metro gives all employees and departments the responsibility of upholding the highest level of safety for passengers. Some of these programs and policies include employee rulebooks, operations manuals, and training programs. Metro also promotes safety and security through passenger and public awareness programs. The goals of the passenger and public awareness programs are to heighten awareness regarding safety, to reduce the occurrence of passenger injuries, and demonstrate a commitment to safety. These awareness programs provide information to the public through a variety of methods which include:

- 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 Metro 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.

- The Rail Safety Orientation Program offers guided tours for students. Student-only tours include safety and system information and limited rides on the Metro Gold, Metro Red, or Metro Blue Lines.

SS-2a Develop and implement a project-specific safety certification plan

The System Safety and Security process will begin during the planning phase and continue through the life cycle of the Build Alternative. The SSPP will provide systematic procedures for the identification, elimination, and control of hazards in the new facilities by building safety into the design through adherence to applicable codes and standards, the use of sound engineering principles, and the implementation of a detailed safety certification program. During the Preliminary Engineering phase, a project specific System Safety and Security Certification Plan (SSCP) will be developed to outline the safety and security technical and management strategies for identification, assessment, prevention, and control of safety hazards and security threat and vulnerabilities associated with the Build Alternative. The plan will also delineate responsibilities for implementing and administering the safety and security programs for the project.

SS-2b Safety certification of all certifiable project elements as described SS-2a

A preliminary hazard analysis (PHA) and other related analyses will serve to identify potential hazards associated with the Build Alternative stations, as well as tunnel and train operations. Project design engineers will then mitigate or protect against identified hazards in their design. A Fire/Life Safety Committee (FLSC) consisting of project management will be established and will function through each phase of the Build Alternative, to review design drawings and address safety-related issues. The new construction will be divided into “Certifiable Elements,” such as track, electrical systems, and fire protection. It is the responsibility of the design engineer, with the assistance of the safety team (Metro FLSC), to ensure that federal, state, and local safety regulations, and Metro fire/life and system safety design criteria are met. These elements will be closely analyzed for design criteria, industry standard, and code compliance. Safety-related requirements will then be placed on a checklist that will be used to verify that the design criteria meets applicable codes and regulations and that the Build Alternative has been constructed in accordance with the design criteria.

The FLSC will be responsible to approve the Safety Certification Checklists. The design engineer will then be required to sign each line item on the checklists, verifying that the design complies with applicable safety requirements, including adherence to codes and regulations, development of operations and maintenance rules and procedures, and development and implementation of appropriate safety training programs. The safety certification checklist will then be given to the contractors to sign each line item, verifying that the Build Alternative was constructed in accordance with the design drawings and specifications. If a given item is not completed, the item will then be reviewed by the FLSC for an acceptable workaround or hazard mitigation prior to advancing into revenue service. The final document in the safety certification process will be the Safety Certification Verification Report (SCVR), which will include certificates of operational readiness for each certifiable element. Any workarounds for incomplete construction or open safety hazards will be listed in this report, with the appropriate mitigation for revenue service.



Open safety hazards or line items will be tracked to ensure that approved mitigation measures are implemented to close the items. Certification will support improved integration of operational considerations into design, which will result in reduction in hazards in service and maintenance activities.

It is assumed that the implementation of the Project SSPP and compliance with the CPUC requirements will maximize the safety and security of passengers so that the Project would not create any significant unsafe conditions for the passengers.

SS-3 Implement a Construction Safety and Security Plan which includes safety rules, procedures, and policies to protect workers and work sites during construction such as warning and/or notification signs, detours, and barriers and includes compliance with OSHA standards.

The contractor will be responsible for the safety of the work site, work personnel, and maintaining California Occupational Safety and Health Administration (Cal-OSHA) work practices during construction. The contractor will be required to prepare the following plans to mitigate construction impacts related to construction safety:

- Construction Safety and Security Plan: this plan will meet the FTA requirement in 49 CFR 633 and address fire prevention, emergency preparedness and response, and protection of the general public and private property from construction activities, including exposure to toxic materials.
- Construction Health and Safety Plan: this plan will meet the requirements of 29 CFR 1910 and 1926 and all other applicable Federal, State, and Local regulations and requirements. Included would be a comprehensive emergency procedure and a “checking-in” procedure to identify those construction workers on site at any given time. It will also include provisions for identifying asbestos and lead-based paint that may be disturbed by the Project.

The Build Alternative project management would ensure that the contractor implements actions to insure the safety of workers and work sites during construction. Project management will be responsible for general plan review, construction site inspection, review, and approval of the contractor’s safety plan, and compliance with the Metro’s Operating Rules and Procedures. Potential safety impacts during the construction period would be addressed through compliance with federal Occupational Safety and Health Administration (OSHA), state (Cal-OSHA), and Metro policies that provide for protection of workers and site visitors. These practices have been shown to reduce potential impacts to less than adverse/ less than significant.

SS-4 Design in accordance with Metro fire/life safety criteria, CBC, and other applicable Federal, State, and local rules and regulations

Fire protection and safety from fire hazard on a fixed guideway transit system is achieved through a composite of facility design, operating equipment, hardware, procedures, and software subsystems that are integrated to provide requirements for the protection of life and property from the effects of fire. The level of fire safety desired for the Project would be achieved by complying with the Metro Fire/Life Safety Criteria and California Building Code (CBC). The CBC contains regulations relating



to the construction and maintenance of buildings and to the use of their premises. Topics addressed in the CBC include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire safety requirements, for new and existing buildings and their premises. The CBC contains specialized technical regulations related to fire and human safety.

The fire protection features and safety from fire hazard for each subsystem is briefly described below.

Stations

The design of stations and their appurtenances would conform to CBC, local City Building Codes, California Code of Regulations (CCR) Title 8, CCR Title 19, and California Public Utilities Commission (CPUC) General orders, and Metro Fire/Life Safety Criteria. The station occupancy classification would be Group A as defined in the CBC. The stations would be a minimum Type I or Type IB constructions as defined in CBC. Fire separations within station public and ancillary areas and between station public and ancillary occupancies and nontransit occupancies would be provided as defined in Metro Fire/Life Safety Criteria and CBC. Protection would be provided from flammable and combustible liquid intrusion. Normal and emergency ventilation may be necessary to preserve the safety of underground facilities in the event of intrusion of toxic or flammable gasses. Emergency ventilation would be provided for the stations for the protection of passengers, employees and emergency personnel. The stations would house emergency ventilation fan shafts at both ends of the stations to remove smoke and fumes in the event of a fire. Emergency back-up power supply would be available to enable gas purging in the event of an area-wide utility power outage. All elevators and escalators will be constructed of non-combustible materials and conform to CBC and Title 8 Elevator Safety Orders. State-of-the-art fire protection systems will be installed, providing for standpipe and sprinkler systems, smoke detection and communication systems. “Blue Light” stations located at the station platform level will facilitate traction power shut off and communication in the event of an electrical emergency or fire at track level. Passenger access and egress will meet NFPA standards. There shall be sufficient means of egress to evacuate the station occupant load based on the emergency condition from the station platforms in 4 minutes or less. The station will also be designed to permit evacuation from the most remote point on the platform to a point of safety in 6 minutes or less. No point of the station platform(s) or mezzanine(s) will be more than 300 feet from a point of safety.

Underground Guideway (Tunnels)

When line sections are to be constructed by the cut-and-cover method, perimeter walls and related construction will be not less than Type IB construction as defined in the CBC. When line sections are to be constructed by a tunneling method through earth, unprotected steel liners, reinforced concrete, or equivalent will be used. Walkways designated for evacuation of passengers will be constructed of noncombustible materials. Noncombustible rail ties or direct fixation fasteners will be used in underground guideway. Ancillary structures and areas within tunnels will be separated from trackway areas by approved fire resistive construction.

Training will be required for both new and present employees on the software/controls for the ventilation system and emergency response scenarios for the Westside Subway Extension. The tunnels will include ventilation systems that will be SCADA-controlled from the ROC, providing the means to move smoke and heat away from passengers and emergency responders in the event of a fire. This condition will require training Metro operating personnel to activate the tunnels’



ventilation system functions based on the location of the fire. “Blue Light” stations will be located in designated areas within the tunnels in compliance with Metro FLS Criteria. These “Blue Light” stations will enable removal of electrical power locally and provide a communication system to the ROC and emergency responders. Passengers will be provided a safe means of egress from transit vehicles in tunnels and through tunnels to a point of safety in the event of an incident requiring train evacuation. Cross passages will be constructed between the two tunnel tubes, for use when one of the tubes must be shut down for response to an emergency. Appropriate lighting systems will be installed for the full length of the system with emergency backup systems to facilitate tunnels maintenance and emergency response. Ancillary structures adjoining the guideway, including ventilation structures, will be fire resistive construction.

Protective signaling and automatic fire sprinkler systems will be provided in all ancillary spaces. The tunnels will also be equipped with a Class I Automatic-Wet Standpipe system to provide protection throughout the underground guideway system.

SS-5 Design in accordance with Metro fire/life safety criteria, Metro ventilation criteria, findings in the *Westside Subway Extension Geotechnical/Subsurface/Seismic/Hazardous Materials Report* and with special design, construction and operational attention to the gassy ground tunnels and stations.

A number of measures will be incorporated into the Project to provide safety from gas related hazards during construction and system operations. These measures are described in detail in Task 14.01.09: Geotechnical/Subsurface/Seismic/Hazardous Materials and are briefly discussed in this section:

- Physical barriers to keep gas out of the tunnels: During construction, the pressure face Tunnel Boring Machines (TBMs) will isolate gas from workers and the public, while gassy soil and tar sands will be separated and treated appropriately. Tunnels will be designed to provide a redundant protection system against gas intrusion. If determined necessary during final design, special liner requirements may be imposed to assist in the control of natural gas intrusion and, if necessary, double gaskets for the tunnel lining or other measures may also be installed.
- Physical barriers to keep gas out of the stations: Appropriate station construction methods will be used to provide protection against gas inflows both during and after construction. If an additional structural liner is needed for station walls flexible sealants such as gas resistant poly-rubber gels and/or High Density Polyethylene (HDPE)) will be installed between the two walls to provide increase resistance to gas intrusion.
- Ventilation Systems: Enhanced ventilation systems will be used where necessary to ensure tunnel and station safety. Methane and other gases are readily diluted and flushed from tunnel and station by a properly designed ventilation system. The ventilation system will consist of many components as described below:



- a. Tunnel Ventilation System (TVS): Multi-purpose, variable speed, reversible fans located at both ends of subway stations will serve the emergency ventilation system and the gas mitigation system.
- b. Underplatform Exhaust (UPE) System: For a typical station, two fans at each end of the station will be provided with ducted connection to the plenums below the platform. The UPE system may be used during emergencies to supplement the airflow of the emergency fans to purge gas from the system.
- c. Overhead Trackway Exhaust (OTE) System: The OTE will use the tunnel ventilation system. It will be used for normal operations cooling, control of smoke from a fire and gas purging.
- d. Concourse Exhaust System (CES): The same fans that serve the OTE and the tunnel will operate at approximately 10 percent capacity to exhaust smoke from small fires in the concourse and will also be used for gas mitigation.

In areas classified as "Potentially Gassy" or "Gassy", all ventilation systems may be used for gas mitigation. To prevent accumulation of gases during non revenue hours a nighttime purge ventilation mode will be provided. This mode will operate one fan at each end of each station in either supply or exhaust mode. Ventilation systems will also be provided in ancillary spaces to maintain an optimum environment and to mitigate possible gas accumulation.

- Gas detection systems with alarms: Permanent gas monitoring equipment will be installed in each station and tunnel cross passages to monitor hazardous gases during operations. Each gas monitoring alarm will be annunciated at the ROC and at the EMP in the station where the gases are detected. The system will initiate a minor or major alarm depending on the lower explosion level (LEL) set for methane and the threshold limit value (TLV) set for hydrogen sulfide. Presence of an alarm will initiate the appropriate Emergency Gas Operating Procedure (EGOP) which will activate a predetermined ventilation scenario to purge the gas and can prompt an automatic evacuation.

SS-6 Incorporate of security features, including lighting, communication devices (e.g., passenger telephones), closed circuit television, signs and other design features, and law enforcement officers to reduce criminal activities.

The Build Alternative provides community residents with an inherently open means of access to mass transportation for travel to, from, and within metropolitan areas with relative ease. Passengers expect public transportation agencies to provide a level of security against crime while using public transportation facilities and systems. However, crime from intentional acts against people, assets, and facilities cannot be completely eliminated. The following mitigation measures can be implemented to achieve the goal of reduced criminal activity for passengers traveling to or from public transportation stations and while waiting on station platforms.

- a) Provide lighting levels at at-grade station entry portals that illuminate the stairs, escalators, elevators, and stations platforms without causing darkness or shadow areas or that result in light trespass to adjacent properties.
- b) Communication devices, e.g., Passenger Telephones (PT), Public Address Systems (PAS), and Silent Alarms (SA) will be provided at station locations. PT's will be monitored by the



ROC; PAS's will broadcast announcements from the ROC to stations for passengers; and SA's will, when activated, trigger an announcement at the ROC to indicate an emergency situation.

- c) Closed Circuit Television (CCTV) systems will be provided for surveillance of at grade station entry portals, sub-grade platforms, and critical infrastructures or restricted areas. Fixed cameras will be mounted where a constant and uninterrupted view is required (i.e., ticket vending machines, access portals, critical infrastructures or restricted areas); whereas, mount pan-tilt-zoom cameras where a range of views are desired.
- d) Design stations by applying the natural surveillance, natural access control, and territoriality principles associated with Crime Prevention Through Environmental Design (CPTED). For example, if trees are planted they should be "limbed (cut) up" to provide an unobstructed view of adjoining streets and business enterprises; various access points to and from at-grade station entry portals should offer passenger entry from several areas; and the distinct property boundary limits should be portrayed.
- e) Provide vandal resistant designs and materials to surfaces exposed to or accessible to the public.
- f) Post signs in plain view that provides passengers with crime awareness and reporting information.
- g) Assign and randomly post law enforcement officers to provide a physical presence at Metro locations within their station jurisdictions.

SS-7 Implement of security features, including security education and employee training specific to terrorism awareness, lighting, communication devices (e.g., passenger telephones), closed circuit television, signs, and other design features to reduce terrorism activities

The Build Alternative provides community residents with an inherently open means of access to mass transportation for travel to, from, and within metropolitan areas with relative ease. Passengers using public transportation facilities and systems expect those public transportation agencies provide a level of protection against terrorist activities. However, crime from intentional acts against people, assets, and facilities cannot be completely eliminated. In addition to mitigation measures d, f and g under SS-6, the following mitigation measures will be implemented achieve the goal of reduced criminal activity for passengers traveling to or from public transportation stations and while waiting on station platforms.

- Prepare procedures to appropriately respond to increases in the Homeland Security Advisory System National Threat Level, as part of the agencies Security Plan. This may include the removal of trash containers on station platforms, increased public awareness announcements, an increase in law enforcement presence at stations, etc.
- Extensive security education and employee training program information specific to terrorism awareness will be provided.



- Provide lighting levels at at-grade station entry portals that illuminate the stairs, escalators, elevators, and stations platforms without causing darkness or shadow areas or that result in light trespass to adjacent properties.
- Communication devices, e.g., Passenger Telephones (PT), Public Address Systems (PAS), and Silent Alarms (SA) will be provided at station locations. PT's will be monitored by the Rail Operations Center (ROC); PAS's will broadcast announcements from the ROC to stations for passengers; and SA's will, when activated, trigger an annunciation at the ROC to indicate an emergency situation.
- Closed Circuit Television (CCTV) systems will be provided for surveillance of at grade station entry portals, sub-grade platforms, and critical infrastructures or restricted areas. Fixed cameras should be mounted where a constant and uninterrupted view is required (i.e., ticket vending machines, access portals, critical infrastructures or restricted areas); whereas, mount pan-tilt-zoom cameras where a range of views are desired.
- Provide an area on the station platform to conduct random screening of passenger's bags and hand carry items.
- Restrict unauthorized vehicles from parking near at-grade level station entry portals. Design removal type vehicle barriers for installation at station portals to enforce standoff distances.
- Restrict access near or alongside air vent/circulation system intakes to prevent the introduction of airborne hazards or dangerous chemicals into the sub grade station or tunnel portal.

SS-8 Develop and implement of a comprehensive emergency preparedness plan, employee and emergency responders training, and system design features

The Build Alternatives will introduce a new type of use in some of the study areas, which will create new demands on the fire, medical emergency response, and police services. The primary responsibility for police services for the system will be the Metro Transit Security Bureau, which is currently provided by contract by the Los Angeles County Sheriff's Department. This force will be expanded, as necessary, to serve the new system. As necessary, assistance may be requested from the local jurisdiction's police, but these incidents will be rare and will not require the local police forces to hire additional staff.

The local fire departments will provide fire protection for the Build Alternatives and will serve as the first responder in the event of a fire on the Metro System. The fire fighters will assume overall command of any fire scene in close liaison with Metro's ROC. In addition to fire suppression, the local Fire Department will also be the first response agency for medical treatment.

For all public services, response time during emergencies is critical and, for most of them, access to the sites of emergencies requires the use of public roadways. The Build Alternatives will improve the operation of the roadway network as compared to the No Build Alternative by reducing congestion and will improve emergency response times. The Build Alternatives will not affect police, fire, or emergency medical facilities adjacent to the alignment.



Operation of the Build alternatives will require the development of a comprehensive Emergency Preparedness Plan (EPP) that can be integrated with Metro's existing EPP procedures. The overall objective of emergency preparedness and planning is to ensure fast and efficient response to emergencies or disasters in a manner that minimizes risk to the safety and health of passengers, employees, and emergency response personnel as well as unnecessary property loss. The EPP will establish the roles and responsibilities that will be carried out not only by Metro personnel, but also by various emergency response agencies in the event of a fire or security emergency. To further educate the emergency responders, a Fire Life Safety Report will be developed to explain the safety features in the proposed tunnels and station, the design specifics related to emergency access and egress, and the security and fire suppression systems.

The Build Alternatives will require special training for emergency response personnel. During the testing phase of the built alternative (before the beginning of operation), Metro will provide training to local emergency responders for practice of emergency procedures. This training will include how to access vehicles under various conditions, how to work around the direct current electrical power, access for station and tunnels, and similar information.

Impact Remaining After Mitigation

Implementation of the recommended mitigation measures will reduce the impacts related to safety during the construction and operational phases of the Project to less than significant for all of the alternatives.