Hazardous Materials Technical Report

for the East San Fernando Valley Transit Corridor

August 2015

Metro®

Prepared by the
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and the Los Angeles County
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Contents

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Acronyms and Abbreviations

2008 RCP	2008 Regional Comprehensive Plan
2012 RTP	2012–2035 Regional Transportation Plan/Sustainable Communities Strategy
AA	Alternatives Analysis
ACM	Asbestos Containing Materials
ADA	Americans with Disabilities Act
ADL	Aerially Deposited Lead
BEP	Business Emergency Plan
BGS	Below ground surface
BRT	Bus rapid transit
Cal EPA	California Environmental Protection Agency
Cal OSHA	California Occupational Safety and Health Administration
CCR	California Code of Regulations
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CIDH	Cast-in-drilled-hole
CPA	Community Plan Area
CUPA	Certified Unified Program Agency
DEIR	Draft Environmental Impact Report
DEIS	Draft Environmental Impact Statement
DOGGR	Division of Oil, Gas, and Geothermal Resources
DTSC	California Department of Toxic Substance Control
DYA	Diaz•Yourman & Associates
EPCRA	Emergency Planning and Community Right to Know Act
ERNS	Emergency Response and Notification System
ESA	Environmental Site Assessment
FTA	Federal Transit Administration
Growth Vision	2004 Compass Blueprint Growth Vision
HMBP	Hazardous Materials Business Plan
HOV	High-occupancy vehicle
I	Interstate
LADOT	Los Angeles Department of Transportation
LAFD	City of Los Angeles Fire Department
LBP	Lead-based paint
LRT	Light rail transit
LRTP	Long-Range Transportation Plan
LUST	Leaking Underground Storage Tank
Metro	Los Angeles County Metropolitan Transportation Authority
MPO	Metropolitan Planning Organization
MSF	Maintenance and storage facility
NEPA	National Environmental Policy Act
OCS	Overhead contact system

OSHA	Occupation Safety and Health Administration
PCB	Polychlorinated biphenyls
PCE	Perchloroethylene
PID	Photoionization detector
RCRA	Resource Conservation and Recovery Act
REC	REC
RMP	Risk Management Plan
ROW	Right-of-way
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	California Regional Water Quality Control Board
SARA	Superfund Amendments and Reauthorization Act
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCRRA	Southern California Regional Rail Authority
SR	State Route
SVOC	Semi-volatile Organic Compound
TBM	Tunnel boring machine
TCE	trichloroethylene
TPH	Total petroleum hydrocarbons
TPSS	Traction power substation
TSCA	Toxic Substance Control Act
TSM	Transportation System Management
TWW	Treated Wood Waste
U.S.C.	United States Code
USEPA	U.S. Environmental Protection Agency
UST	Underground Storage Tanks
VOC	Volatile Organic Compound

Chapter 1
Introduction

1.1 Study Background

What Is the East San Fernando Valley Transit Corridor?

The Federal Transit Administration (FTA) and Los Angeles County Metropolitan Transportation Authority (Metro) have initiated a Draft Environmental Impact Statement (DEIS)/Environmental Impact Report (DEIR) for the East San Fernando Valley Transit Corridor Project (project). The DEIS/DEIR is being prepared with the FTA as the Lead Agency under the National Environmental Policy Act (NEPA) and Metro as the Lead Agency under the California Environmental Quality Act (CEQA).

The DEIS/DEIR and related engineering are being undertaken by Metro, in close coordination with the Cities of Los Angeles and San Fernando. The DEIS/DEIR will be a combined document, complying with the most recent state and federal environmental laws. The public/community outreach component of the project is being undertaken as an integrated parallel effort to the DEIS/DEIR.

Prior to the initiation of the DEIS/DEIR, an Alternatives Analysis (AA) was received by the Metro Board in January 2013 to study the East San Fernando Valley Transit Corridor and define, screen, and recommend alternatives for future study. This study enabled Metro, the City of Los Angeles, and the City of San Fernando to evaluate a range of new public transit service alternatives that can accommodate future population growth and transit demand while being compatible with existing land uses and future development opportunities. The study considered the Sepulveda Pass Corridor, which is another Measure R project, and the proposed California High Speed Rail Project. Both of these projects may be directly served by a future transit project in the project study area. The Sepulveda Pass Corridor could eventually link the West Los Angeles area to the east San Fernando Valley and the California High Speed Rail Project via the project corridor. As part of the January 2013 AA, most of Sepulveda Boulevard was eliminated as an alignment option as well as the alignment extending to Lakeview Terrace. As a result of the AA, modal recommendations were for bus rapid transit (BRT) and light rail transit (LRT).

As a result of the alternatives screening process and feedback received during the public scoping period, a curb-running BRT, median-running BRT, median-running low-floor LRT/tram, and a median-running LRT were identified as the four build alternatives, along with the Transportation Systems Management (TSM) and No-Build Alternatives, to be carried forward for analysis in this DEIS/DEIR.

1.1.1 Study Area

Where Is the Study Area Located?

The East San Fernando Valley Transit Corridor Project study area is located in the San Fernando Valley in the County of Los Angeles. Generally, the project study area extends from the city of San Fernando and the Sylmar/San Fernando Metrolink Station in the north to the Van Nuys Metro Orange Line Station within the city of Los Angeles in the south. However, the project study area used

for the environmental issue described in this report could vary from this general project study area, depending on the needs of the analysis. For the purposes of the analysis contained in this report, the project study area coincides with the general project study area.

The eastern San Fernando Valley includes the two major north-south arterial roadways of Sepulveda and Van Nuys Boulevards, spanning approximately 10 to 12 miles and the major north-west arterial roadway of San Fernando Road.

Several freeways traverse or border the eastern San Fernando Valley. These include the Ventura Freeway (US-101), the San Diego Freeway (Interstate [I] 405), the Golden State Freeway (I-5), the Ronald Reagan Freeway (State Route [SR] 118), and the Foothill Freeway (I-210). The Hollywood Freeway (SR-170) is located east of the project study area. In addition to Metro Local and Metro Rapid bus service, the Metro Orange Line (Orange Line) BRT service, the Metrolink Ventura Line commuter rail service, Amtrak inter-city rail service, and the Metrolink Antelope Valley Line commuter rail service are the major transit corridors that provide interregional trips in the project study area.

Land uses in the project study area include neighborhood and regional commercial land uses, as well as government and residential land uses. Specifically, land uses in the project study area include government services at the Van Nuys Civic Center, retail shopping along the project corridor, and medium- to high-density residential uses throughout the project study area. Notable land uses in the eastern San Fernando Valley include: The Village at Sherman Oaks, Panorama Mall, Whiteman Airport, Van Nuys Airport, Mission Community Hospital, Kaiser Permanente Hospital, Van Nuys Auto Row, and several schools, youth centers, and recreational centers.

1.1.2 Alternatives Considered

What Alternatives Are under Consideration?

The following six alternatives, including four build alternatives, a TSM Alternative, and the No-Build Alternative, are being evaluated as part of this study:

- No-Build Alternative
- TSM Alternative
- Build Alternative 1 – Curb-Running Bus Rapid Transit (BRT) Alternative
- Build Alternative 2 – Median-Running BRT Alternative
- Build Alternative 3 – Low-Floor LRT/Tram Alternative
- Build Alternative 4 – Light Rail Transit (LRT) Alternative

All build alternatives would operate over 9.2 miles, either in a dedicated bus lane or guideway (6.7 miles) and/or in mixed-flow traffic lanes (2.5 miles), from the Sylmar/San Fernando Metrolink station to the north to the Van Nuys Metro Orange Line station to the south, with the exception of the LRT Alternative, , which includes a 2.5-mile segment within Metro-owned railroad right-of-way (ROW) adjacent to San Fernando Road and Truman Street and a 2.5-mile underground segment beneath portions of Panorama City and Van Nuys.

1.1.2.1 No-Build Alternative

The No-Build Alternative represents projected conditions in 2040 without implementation of the project. 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.

These projects include highway and transit projects funded by Measure R and specified in the current constrained element of the Metro 2009 Long-Range Transportation Plan (LRTP) and the 2012 Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Existing infrastructure and future planned and funded projects assumed under the No-Build Alternative include:

- Existing Freeways – Interstate 5, and Interstate 105, State Route 118, and U.S. 101;
- Existing Transitway – Metro Orange Line;
- Existing Bus Service – Metro Rapid and Metro Local Shuttle;
- Los Angeles Department of Transportation Commuter Express, and DASH;
- Existing and Planned Bicycle Projects – Bicycle facilities on Van Nuys Boulevard and connecting east/west facilities; and
- Other Planned Projects – Various freeway and arterial roadway upgrades, expansion to the Metro Rapid bus system, upgrades to the Metrolink system, and construction of the proposed California High Speed Rail project.

This alternative establishes a baseline for comparison to other alternatives in terms of potential environmental effects, including adverse and beneficial environmental effects.

1.1.2.2 TSM Alternative

The TSM Alternative enhances the No-Build Alternative and emphasizes transportation systems upgrades, which may include relatively low-cost transit service improvements. It represents efficient and feasible improvements to transit service, such as increased bus frequencies and minor modifications to the roadway network. Additional TSM Alternative transit improvements that may be considered include, but are not limited to, traffic signalization improvements, bus stop amenities/improvements, and bus schedule restructuring (Figure 1-1).

The TSM Alternative considers the existing bus network, enhanced operating hours, and increased bus frequencies for Metro Rapid Line 761 and Local Line 233. Under this alternative, the Metro Rapid Line 761 and Metro Local Line 233 bus routes would retain existing stop locations. This alternative would add 20 additional buses to the existing Metro Local 233 and Metro Rapid 761 bus routes. These buses would be similar to existing Metro 60-foot articulated buses, and each bus would have the capacity to serve up to 75 passengers (57 seats x 1.30 passenger loading standard). Buses would be equipped with transit signal priority equipment to allow for improved operations and on-time performance.

The existing Metro Division 15 maintenance and storage facility (MSF) located in Sun Valley would be able to accommodate the 20 additional buses with the implementation of the TSM Alternative. Operational changes would include reduced headway (elapsed time between buses) times for Metro Rapid Line 761 and Metro Local Line 233, as follows:

- Metro Rapid Line 761 would operate with headways reduced from 10 minutes to 8 minutes during peak hours (7 a.m. to 9 a.m. and 4 p.m. to 7 p.m. on weekdays) and from 17.5 minutes to 12 minutes during off-peak hours.
- Metro Local Line 233 would operate with headways reduced from 12 minutes to 8 minutes during peak hours and from 20 minutes to 16 minutes during off-peak hours.

Figure 1-1: TSM Alternative

Source: KOA and ICF International, 2014.

1.1.2.3 Build Alternative 1 – Curb-Running BRT Alternative

Under the Curb-Running BRT Alternative, the BRT guideway would incorporate 6.7 miles of existing curb lanes (i.e., lanes closest to the curb) along Van Nuys Boulevard between San Fernando Road and the Metro Orange Line. This alternative would be similar to the Metro Wilshire BRT project and would operate similarly. The lanes would be curb-running bus lanes for Metro Rapid Line 761 and Metro Local Line 233, and for other transit lines that operate on short segments of Van Nuys Boulevard. In addition, this alternative would incorporate 2.5 miles of mixed-flow lanes, where buses would operate in the curb lane along San Fernando Road and Truman Street between Van Nuys Boulevard and Hubbard Avenue for Metro Line 761. Metro Line 233 would continue north on Van Nuys Boulevard to Lakeview Terrace. These improvements would result in an improved Metro Rapid Line 761 (hereafter referred to as 761X) and an improved Metro Local Line 233 (hereafter referred to as 233X). The route of the Curb-Running BRT Alternative is illustrated in Figure 1-2.

From the Sylmar/San Fernando Metrolink station:

- Metro Rapid Line 761X would operate within roadway travel lanes on Truman Street and San Fernando Road.
- At Van Nuys Boulevard, Metro Rapid Line 761X would turn southwest and travel south within a curb-running dedicated bus lane along Van Nuys Boulevard.
- The alternative would continue to be curb running along Van Nuys Boulevard until reaching the Metro Orange Line Van Nuys station where Metro Rapid Line 761X service would be integrated into mixed-flow traffic.
- Metro Line 761X would then continue south to Westwood as under existing conditions, though it should be noted that in December 2014 the Metro Rapid Line 761 will be re-routed to travel from Van Nuys Boulevard to Ventura Boulevard, and then to Reseda Boulevard, while a new Metro Rapid Line 788 would travel from Van Nuys Boulevard through the Sepulveda Pass to Westwood as part of a Metro demonstration project.

Metro Local Line 233X would operate similar to how it currently operates between the intersections of Van Nuys and Glenoaks Boulevards to the north and Van Nuys and Ventura Boulevards to the south. However, Metro Local Line 233X would operate with improvements over existing service because it would utilize the BRT guideway where its route overlaps with the guideway along Van Nuys Boulevard.

Transit service would not be confined to only the dedicated curb lanes. Buses would still have the option to operate within the remaining mixed-flow lanes to bypass right-turning vehicles, a bicyclist, or another bus at a bus stop.

The Curb-Running BRT Alternative would operate in dedicated bus lanes, sharing the lanes with bicycles and right-turning vehicles. However, on San Fernando Road and Truman Street, no dedicated bus lanes would be provided. The Curb-Running BRT Alternative would include 18 bus stops.

Figure 1-2: Build Alternative 1 - Curb-Running BRT Alternative

Source: KOA and ICF International, 2014.

1.1.2.4 Build Alternative 2 – Median-Running BRT Alternative

The Median-Running BRT Alternative consists of approximately 6.7 miles of dedicated median-running bus lanes between San Fernando Road and the Metro Orange Line, and would have operational standards similar to the Metro Orange Line. The remaining 2.5 miles would operate in mixed-flow traffic between the Sylmar/San Fernando Metrolink Station and San Fernando Road/Van Nuys Boulevard. The Median-Running BRT Alternative is illustrated in Figure 1-3.

Similar to the Curb-Running BRT Alternative, the Median-Running BRT (Metro Rapid Line 761X) would operate as follows from the Sylmar/San Fernando Metrolink station:

- Metro Rapid Line 761X would operate within mixed-flow lanes on Truman Street and San Fernando Road.
- At Van Nuys Boulevard, the route would turn southwest and travel south within the median of Van Nuys Boulevard in a new dedicated guideway.
- Upon reaching the Van Nuys Metro Orange Line Station, the dedicated guideway would end and the Metro Rapid Line 761X service would then be integrated into mixed-flow traffic.
- The route would then continue south to Westwood, similar to the existing route. Similar to Build Alternative 1, it should be noted that in December 2014 the Metro Rapid Line 761 will be re-routed to travel from Van Nuys Boulevard to Ventura Boulevard, and then to Reseda Boulevard, while a new Metro Rapid Line 788 would travel from Van Nuys Boulevard through the Sepulveda Pass to Westwood as part of a Metro demonstration project.

Metro Local Line 233 would operate similar to existing conditions between the intersections of Van Nuys and Glenoaks Boulevards to the north and Van Nuys and Ventura Boulevards to the south. 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 Americans with Disabilities Act (ADA) compliant. These stops would also serve the redirected 761X line:

1. Sylmar/San Fernando Metrolink Station
2. Hubbard Station
3. Maclay Station
4. Paxton Station
5. Van Nuys/San Fernando Station

Along the Van Nuys Boulevard segment, bus stop platforms would be constructed in the median. Seventeen new median bus stops would be included.

Figure 1-3: Build Alternative 2 – Median-Running BRT Alternative

Source: KOA and ICF International, 2014.

1.1.2.5 Build Alternative 3 – Low-Floor LRT/Tram Alternative

The Low-Floor LRT/Tram Alternative would operate along a 9.2-mile route from the Sylmar/San Fernando Metrolink station to the north, to the Van Nuys Metro Orange Line station to the south. The Low-Floor LRT/Tram Alternative would operate in a median dedicated guideway for approximately 6.7 miles along Van Nuys Boulevard between San Fernando Road and the Van Nuys Metro Orange Line station. The Low-Floor LRT/Tram alternative would operate in mixed-flow traffic lanes on San Fernando Road between the intersection of San Fernando Road/Van Nuys Boulevard and just north of Wolfskill Street. Between Wolfskill Street and the Sylmar/San Fernando Metrolink station, the low-floor LRT/tram would operate in a median dedicated guideway. It would include 28 stations. The route of the Low-Floor LRT/Tram Alternative is illustrated in Figure 1-4.

The Low-Floor LRT/Tram Alternative would operate along the following route:

- From the Sylmar/San Fernando Metrolink station, the low-floor LRT/tram would operate within a median dedicated guideway on San Fernando Road.
- At Wolfskill Street, the low-floor LRT/tram would operate within mixed-flow travel lanes on San Fernando Road to Van Nuys Boulevard.
- At Van Nuys Boulevard, the low-floor LRT/tram would turn southwest and travel south within the median of Van Nuys Boulevard in a new dedicated guideway.
- The low-floor LRT/tram would continue to operate in the median along Van Nuys Boulevard until reaching its terminus at the Van Nuys Metro Orange Line Station.

Based on Metro's *Operations Plan for the East San Fernando Valley Transit Corridor Project,* the Low-Floor LRT/Tram Alternative would assume a travel speed similar to that of the Median-Running BRT Alternative, with speed improvements of 18 percent during peak hours/peak direction and 15 percent during off-peak hours.

The Low-Floor LRT/Tram Alternative would operate using low-floor articulated vehicles that would be electrically powered by overhead wires. This alternative would include supporting facilities, such as an overhead contact system (OCS), traction power substations (TPSS), signaling, and a maintenance and storage facility (MSF).

Because the Low-Floor LRT/Tram Alternative would fulfill the current functions of the existing Metro Rapid Line 761 and Metro Local Line 233, these bus routes would be modified to maintain service only to areas outside of the project corridor.

Stations for the Low-Floor LRT/Tram Alternative would be constructed at various intervals along the entire route. There are portions of the route where stations are closer together and other portions where they are located further apart. Twenty-eight stations are proposed with the Low-Floor LRT/Tram Alternative. The 28 proposed low-floor LRT/tram stations would be ADA compliant.

Figure 1-4: Build Alternative 3 – Low-Floor LRT/Tram Alternative

Source: KOA and ICF International, 2014.

1.1.2.6 Rail Alternative 4 – LRT Alternative

Similar to the Low-Floor LRT/Tram Alternative, the LRT would be powered by overhead electrical wires (Figure 1-5). Under Build Alternative 4, the LRT would travel in a dedicated guideway from the Sylmar/San Fernando Metrolink station along San Fernando Road south to Van Nuys Boulevard, from San Fernando Road to the Van Nuys Metro Orange Line Station, over a distance of approximately 9.2 miles. The LRT Alternative include a segment in exclusive ROW through the Antelope Valley Metrolink railroad corridor, a segment with semi-exclusive ROW in the middle of Van Nuys Boulevard, and an underground segment beneath Van Nuys Boulevard from just north of Parthenia Street to Hart Street.

The LRT Alternative would be similar to other street-running LRT lines that currently operate in the Los Angeles area, such as the Metro Blue Line, Metro Gold Line, and Metro Exposition Line. The LRT would travel along the median for most of the route, with a subway of approximately 2.5 miles in length between Vanowen Street and Nordhoff Street. On the surface-running segment, the LRT Alternative would operate at prevailing traffic speeds and would be controlled by standard traffic signals.

Stations would be constructed at approximately 1-mile intervals along the entire route. There would be 14 stations, three of which would be underground near Sherman Way, the Van Nuys Metrolink station, and Roscoe Boulevard. Entry to the three underground stations would be provided from an entry plaza and portal. The entry portals would provide access to stairs, escalators, and elevators leading to an underground LRT station mezzanine level, which, in turn, would be connected via additional stairs, escalators, and elevators to the underground LRT station platforms

Similar to the Low-Floor LRT/Tram Alternative, 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.

Figure 1-5: Build Alternative 4 – LRT Alternative

Source: KOA and ICF International, 2014.

Chapter 2
Regulatory Framework/Methodology

2.1 Regulatory Framework

2.1.1 Federal Regulations

The U.S. Environmental Protection Agency (USEPA) is the lead federal agency responsible for enforcing federal regulations regarding hazardous materials. The primary legislation governing hazardous materials includes the Resource Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and the Superfund Amendments and Reauthorization Act (SARA).

2.1.1.1 RCRA

RCRA regulates the generation, transportation, treatment, storage, and disposal of hazardous waste through comprehensive life cycle or "cradle to grave" tracking requirements. These include maintaining inspection logs of hazardous waste storage locations, records of quantities being generated and stored, and a manifest of pick-ups and deliveries to licensed treatment/storage/disposal facilities. RCRA also identifies standards for treatment, storage, and disposal.

2.1.1.2 CERCLA

CERCLA, also known as Superfund, created a tax on the chemical and petroleum industries to provide for response and cleanup of hazardous substances that may endanger public health or the environment. CERCLA established requirements for abandoned hazardous waste sites and provided for liability of persons responsible for release of hazardous waste at these sites.

2.1.1.3 SARA

SARA amended CERCLA to increase state involvement and required Superfund actions to consider state environmental laws and regulations. SARA also established a regulatory program for underground storage tanks (USTs) and the Emergency Planning and Community Right-to-Know Act (EPCRA).

2.1.1.4 Toxic Substance Control Act

Toxic Substance Control Act (TSCA) established the mechanisms by which USEPA tracks, screens, and tests industrial chemicals currently produced or imported into the United States that may pose an environmental or human-health hazard. TSCA addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos, radon, and lead-based paint.

2.1.1.5 Federal Occupational Safety and Health Act

The Occupational Safety and Health Administration (OSHA) administers this legislation, which requires special training of handlers of hazardous materials, notification to employees who work in the vicinity of hazardous materials, acquisition from the manufacturer of material safety data sheets that describe the proper use of hazardous materials and training of employees to remediate any hazardous material accidental releases.

This legislation regulates lead and asbestos as it relates to employee safety through a set of notification and corrective action requirements, warning signs and labels, controlled access use of protective equipment, demolition/renovation procedures, housekeeping controls, training, and in certain cases, air monitoring and medical surveillance to reduce potential exposure. This legislation also requires contractors conducting lead-based paint and asbestos surveys and removal to be certified by the California Occupational Safety and Health Administration (Cal OSHA).

2.1.2 State Regulations

Certain chemical and physical properties of a substance may cause it to be considered hazardous. As defined by the California Code of Regulations (CCR), Title 22, Section 66084, a "hazardous material" is a "substance or combination of substances which, because of its quantity, concentration, physical, chemical, or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed."

According to the California Health and Safety Code, Section 25124, "hazardous waste" is any hazardous material that is abandoned, discarded or in storage prior to recycling. For example, excavated soil containing hazardous materials would be considered hazardous waste if the concentration of contaminants exceeded specific CCR Title 22 criteria.

CEQA Statute (California Public Resources Code, Division 13 Environmental Protection), Section 21092.6 Location of Projects on Hazardous Waste Sites List, directs the lead agency to consult the lists compiled pursuant to Section 65962.5 of the Government Code to determine whether the project and any alternatives are included on any hazardous waste sites lists.

The California Department of Toxic Substance Control (DTSC) and the Regional Water Quality Control Board (RWQCB) are the state agencies primarily responsible for the regulation of hazardous materials in California. DTSC is responsible for the management of hazardous substances and oversees the investigation and remediation of contaminated sites. The Los Angeles RWQCB is primarily responsible for the protection of groundwater and surface water resources from hazardous materials in the project area.

2.1.2.1 California Hazardous Waste Control Law, California Health and Safety Code, Division 20, Chapter 6.5

This state legislation is the basic hazardous waste statute in California and is administered by DTSC. Similar to but more stringent than RCRA, this law applies to a broader range of hazardous wastes and requires recycling and waste reduction programs.

2.1.2.2 Carpenter-Presley-Tanner Hazardous Substance Account Act, California Health and Safety Code, Division 20, Chapter 6.8

This legislation authorizes DTSC and RWQCB to require, oversee, and recover costs for the remediation of sites where contamination of soil and water present a hazard to human health or the environment.

2.1.2.3 State of California Safety and Health Act

Cal OSHA regulates worker safety similar to federal OSHA but also requires preparation of an Injury and Illness Prevention Program, an employee safety program of inspectors and procedures to correct unsafe conditions, employee training, and occupational safety communication. In addition, Cal OSHA regulations indirectly protect the general public by requiring construction managers to post warning signs, limit public access to construction areas, and obtain permits for work considered to present a significant risk of injury, such as excavations greater than five feet.

2.1.2.4 Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

The California Environmental Protection Agency (Cal EPA) adopted regulations in 1996 to establish a Unified Hazardous Waste and Materials Management Regulatory Program and designated local agencies called Certified Unified Program Agencies (CUPAs). These agencies have jurisdiction to manage hazardous substances with respect to the following:

- Hazardous waste generators and hazardous waste on-site treatment;
- Underground storage tanks;
- Aboveground storage tanks;
- Hazardous materials release response plans and inventories (business emergency plans), including Unified Fire Code hazardous materials management plans and inventories; and
- Risk management and accidental release prevention programs.

The CUPA with local jurisdiction over the project area is the Los Angeles County Fire Department, Health Hazardous Materials Division.

2.1.2.5 Waters Bill of 1985 (Business Emergency Plan/Hazardous Materials Business Plan)

Administered by the CUPA, this State legislation requires facilities that meet minimum hazardous materials use/storage thresholds to file a Business Emergency Plan (BEP), or a Hazardous Materials Business Plan (HMBP), which includes a complete inventory of the hazardous materials being used and stored on site. Employee training and emergency response plans and procedures for the accidental release of hazardous materials are also included in a BEP.

2.1.2.6 La Follette Bill of 1986 (Risk Management Plan)

Administered by the CUPA, this State legislation requires preparation of a Risk Management Plan (RMP) for commercial operations that use hazardous materials at defined thresholds. The RMP includes management, engineering, and safety studies and plans for physical improvements to minimize accidental hazardous materials releases. It is implemented via fire inspectors, plan checking, BEP/HMBP disclosure requirements, and filing of the RMP (updated every three years).

2.1.2.7 South Coast Air Quality Management District Rule 1403

South Coast Air Quality Management District Rule 1403 regulates asbestos as a toxic material and controls the emission of asbestos from demolition and renovation. Rule 1403 establishes requirements for surveying structures and procedures for the removal, handling, storage, and disposal of asbestos-controlling materials.

2.1.3 Local Regulations

Local jurisdictions, departments, and documents that regulate and oversee issues related to hazardous materials within the project study area are listed below:

- The City of Los Angeles Department of Building and Safety
- The City of Los Angeles Bureau of Sanitation, Industrial Waste Management Division
- The City of Los Angeles Fire Department, Hazardous Materials Divisions
- The City of Los Angeles Fire Department, Underground Storage Tank Division
- Uniform Fire Code
- Los Angeles Municipal Code – Methane and Methane Buffer Zones

2.2 Methodology

The methodology used to identify potential impacts consisted of locating potentially hazardous sites and comparing their locations with the route of the proposed project. A Phase I Environmental Site Assessment (ESA) was prepared by DYA in April 2013 in which hazardous assessment documents previously prepared for the project were reviewed and potential hazards on the project site were evaluated.

2.3 Significance Thresholds

2.3.1 Federal

NEPA does not include specific significance thresholds. According to the Council on Environmental Quality's (CEQ) Regulations for Implementing the Procedural Provisions of NEPA, the determination of significance under NEPA is based on context and intensity. The CEQA thresholds (described below) encompass the 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 project and its alternatives.

2.3.2 State

2.3.2.1 State CEQA Guidelines

The criteria used to determine the significance of an impact are based on Appendix G of the State CEQA Guidelines. The proposed project could result in a significant impact if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or wastes within one-quarter mile of an existing or proposed school;
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, if it would create a significant hazard to the public or the environment.
- Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area;
- Be located within the vicinity of a private airstrip and result 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; or
- Expose people or structures to a significant risk or loss, injury, or death involving wildland fires including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

2.3.2.2 L.A. CEQA Thresholds Guide

The *L.A. CEQA Thresholds Guide* addresses impacts with respect to hazards under Section F, including F.1 Risk of Upset/Emergency Preparedness and F.2 Human Health Hazards. The *L.A. CEQA Thresholds Guide* (page F.1-2) states that a project normally will have a significant impact with respect to hazards if it would:

- Create a significant hazard to the public or environment through the routine transport, storage, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, and as a result, create a significant hazard to the public or the environment; or
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Chapter 3
Affected Environment/Existing Conditions

The ESA prepared for the site focused on potential hazardous substances that may be encountered by construction activities associated with the project. The components of the transit alternatives that may require earthwork are as summarized below.

- Excavations as deep as 10 feet below the ground surface (bgs) at the centers and as deep as 5 feet bgs at the shoulders of existing street ROWs for at-grade portions of the alternatives including the station, TPSS, and MSF locations.
- Below-grade segment of dedicated guideway along Van Nuys Boulevard between Vanowen Street and Osborn Street that would consist of approximately 1,300 lineal feet of open-cut trench and approximately 12,000 lineal feet of tunnel constructed using cut-and-cover or tunnel boring machine (TBM) techniques. The bottom of the below-grade segment may be as deep as 80 feet bgs and may require shoring involving deep excavations, such as cast-in-drilled-hole (CIDH) piles.
- Widening and/or structurally retrofitting existing culvert crossings and bridges along the potential corridor alignments to accommodate the proposed Low-Floor LRT/Tram and LRT improvements may require excavations of approximately 15 feet bgs.
- Replacing the Pacoima Wash Bridge on Southern California Regional Rail Authority (SCRRA) ROW and constructing the new pedestrian bridge at the Metrolink San Fernando Station may require excavations greater than 50 feet bgs for CIDH piles.
- Constructing the pedestrian bridge at the San Fernando Metrolink Station could potentially be supported on CIDH piles as the foundation system.
- Relocating an existing 72-inch-diameter storm drain pipeline located within the existing Van Nuys Boulevard ROW may require excavations as deep as 15 feet bgs.

The ESA identified facilities located within one-quarter mile of the project ROW that might reasonably be anticipated to emit hazardous emissions or handle hazardous or acutely hazardous material in accordance with the State CEQA Guidelines. Due to the large volume of site inventory and supporting data, a summary of the sites that have potentially recognizable environmental concerns (REC) directly related to the project is provided below.

3.1 National Priority List

Soil and groundwater contamination is potentially present in the area of the Pacoima Wash Bridge adjacent to San Fernando Road. Contamination in this area of the project has historically been caused by several adjacent sites that are listed under the National Priority List (NPL) and EnviroStor databases. Contaminants included volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), heavy metals, and total petroleum hydrocarbons (TPH). Research of nearby database sites in the area indicates that groundwater may be as shallow as 45 feet bgs. As a precaution, if the proposed widening of the Pacoima Wash Bridge will involve excavations into the groundwater, then construction spoils (e.g., excavated soils, cuttings generated during installation of CIDH piles) in contact with the groundwater should be contained and tested for the aforementioned contaminants to determine appropriate disposal. Alternatively, a Phase II subsurface investigation

can be performed to evaluate the need for environmental remediation measures during construction at the locations of potential excavations along the project ROW that may encounter groundwater. The Phase II site investigation could include the installation of groundwater monitoring wells if there is a potential to encounter groundwater during construction.

3.2 Underground Storage Tanks and Leaking Underground Storage Tanks

Registered underground storage tanks (USTs) could be an environmental concern when they are within, or immediately adjacent to, the project ROW. Leaking underground storage tanks (LUSTs) cases could potentially contaminate the groundwater. UST and LUSTs within ¼ mile of the project alignment are shown on Figure 3-1. UST and LUSTs were found to be at locations of potential impacts within the project area if they met the following criteria:

- Soil and groundwater contamination caused by LUSTs within ⅛ mile of the project ROW. The estimate being that contamination would have generally occurred below a depth of 2 feet bgs and may have encroached on the project ROW from multiple former auto stations.
- Undocumented soil and groundwater contamination caused by USTs adjacent to the project ROW. The estimate being that contamination would have generally occurred below a depth of 5 feet bgs.

3.3 Oil Wells

Limited oil and gas exploration and pumping from proven reserves have occurred in the areas surrounding the project ROW. The Wildcat Maps and the California Department of Conservation Division of Gas and Geothermal Resources (DOGGR) identified two former plugged and abandoned dry hole wells exist adjacent to the proposed project ROW. The locations of these wells are shown on Figure 3-2.

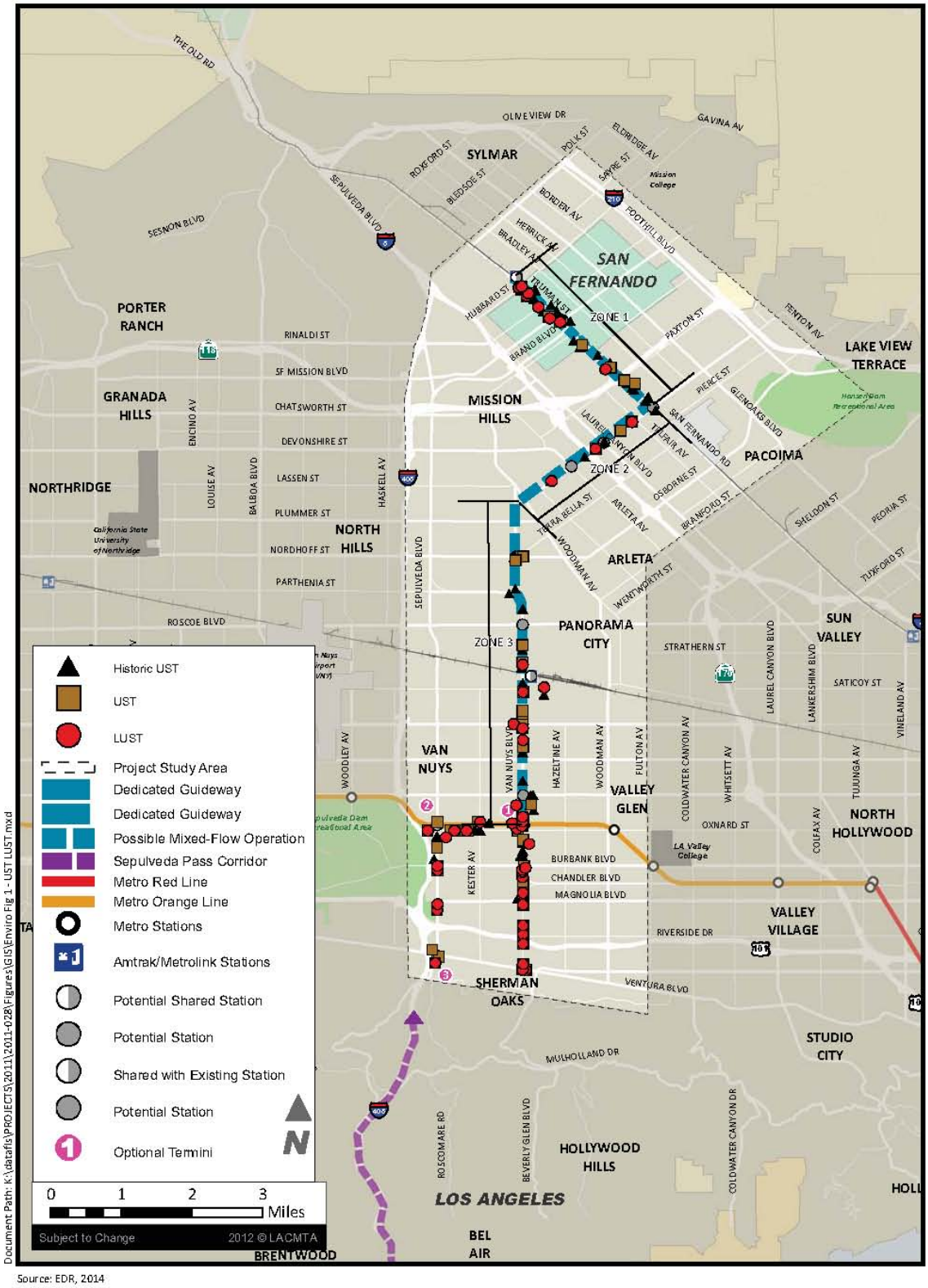
3.4 Spills

A record of releases of hazardous substances contaminating soil within and adjacent to the project ROW were registered in the Emergency Response and Notification System (ERNS) database. The estimate being that contamination would have generally occurred within the upper 5 feet of soil.

3.5 Polychlorinated Biphenyl

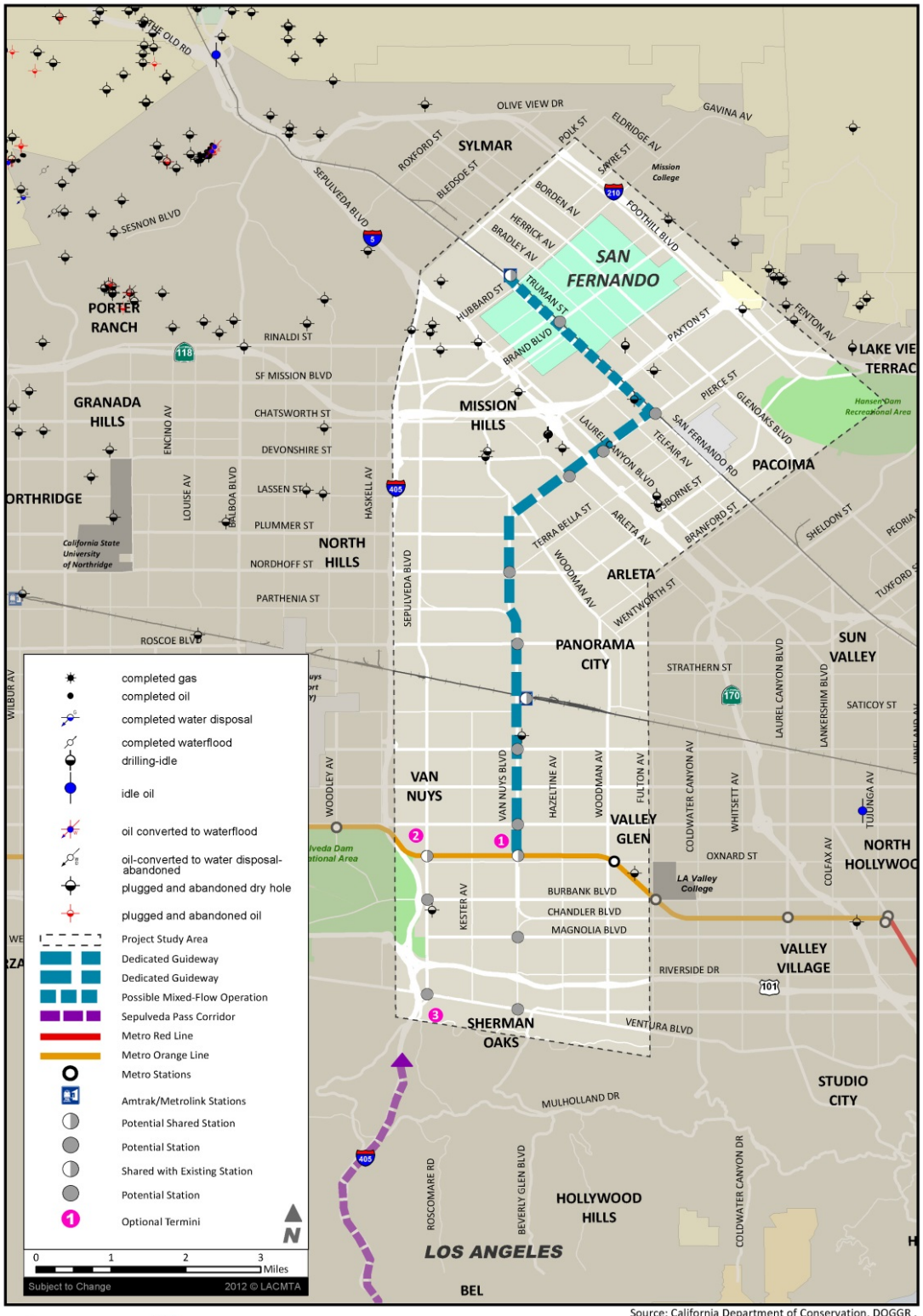
Potential polychlorinated biphenyl– (PCB-) containing equipment, such as electrical transformers and substations were present adjacent to the project ROW at the northwest corner of the intersection of Van Nuys Boulevard and Kewen Avenue. PCBs may be encountered within the upper 5 feet of soil adjacent to the electrical transformers and substations.

Figure 3-1: UST and LUSTs



Source: EDR, 2014

Figure 3-2: DOGGR Wells



Source: California Department of Conservation, DOGGR .

Metro

3.6 Asbestos-Containing Material

Asbestos-containing material (ACM) may be present in the existing bridge crossings at the Pacoima Diversion Channels. Existing structures located within areas of proposed ROW acquisitions may also contain ACM.

3.7 Arsenic from Weed Killer

Railroad operations have historically been known to use various substances for weed control within the railroad ROW. Near-surface soils within the Metro Orange Line ROW may contain arsenic from weed killers (herbicides) commonly used in the past by railroads.

3.8 Railroad Ties

Railroad ties may be present beneath Van Nuys Boulevard. Railroad ties are commonly treated with various chemicals for preservation including, but not limited to, creosote, pentachlorophenol and metallic arsenates. Upon removal during construction, railroad ties remaining within the former railroad bed in the ROW may either become a product suitable for reuse or a waste product. Upon removal, railroad ties designated for reuse should be managed as Treated Wood Waste (TWW) in accordance with Alternative Management Standards provided in CCR Title 22 Section 67386. Railroad-tie materials designated for disposal should be considered potentially hazardous TWW and should be managed and disposed in accordance with Title 22 Section 67386.

In addition, railroad ties previously salvaged and stored for reuse at various locations within the project ROW should be managed as TWW in accordance with Alternative Management Standards provided in CCR Title 22 Section 67386.

3.9 Lead

Soils adjacent to paved areas within the project ROW may contain aerially deposited lead (ADL) from vehicle exhaust. Lead and other heavy metals such as chromium may be present within yellow thermoplastic paint markings on the pavement.

Existing structures located within areas of proposed ROW acquisitions should be evaluated for suspect lead-based paint (LBP) as part of site-specific ESAs. Lead and other heavy metals, such as chromium, may be present in yellow thermoplastic paint markings on the pavement. These surfacing materials should be tested for LBP prior to removal.

3.10 Manufacture, Storage, or Release of Hazardous Materials

Properties potentially to be acquired are listed on multiple databases and should be evaluated further for contaminants that were manufactured, stored, or released from the facility if the properties will be acquired.

3.11 Underground Injection Control Wells

An existing underground injection control well was located adjacent to the proposed tunnel, along Van Nuys Boulevard, of the LRT Alternative.

3.12 Dry Cleaners

Portions of the project alignment are adjacent to former or current dry cleaners, and the soil and groundwater along the portions of the project alignment that are adjacent to former and current dry cleaners may contain perchloroethylene (PCE).

Chapter 4
Environmental Consequences/ Environmental Impacts

Based on review of available data noted in Section 3, existing conditions along the proposed project alignment were evaluated to determine whether they could affect or be affected by project construction and operation. Cumulative impacts due to the combined effects of the proposed and other projects in the area are also described.

4.1 Operational Impacts

This impact analysis evaluates the operational hazardous materials effects of project implementation that could occur in the project study area.

4.1.1 No-Build Alternative

The No-Build Alternative would not result in new project facilities; therefore, there would be no operational impacts related to hazardous materials under this alternative.

4.1.2 TSM Alternative

The TSM Alternative would include relatively low-cost transit service improvements, such as increased bus frequencies and minor modifications to the roadway network. Increased bus service could result in increased use of hazardous materials required to operate and maintain the bus fleet. Improper handling of these hazardous materials could result in spills adversely affecting the environment or public health. However, the increased use of hazardous materials is not expected to be substantial. Additionally, hazardous materials would be stored, used, and disposed of in accordance with federal, state, and local regulations, and Metro's standard operating procedures.

Other impacts that could also occur include release of lubricants contained in bus vehicles due to mechanical failure, an accident (collisions with other motor vehicles could result in release of lubricants and fuels in those vehicles, as well), or other incidents. However, emergency responders and maintenance personnel are equipped to contain the volume of contaminants that may be released. Additionally, potential incidents that would result in the release of more than minor amounts of hazardous materials are expected to occur infrequently. Therefore, the TSM Alternative would result in a less-than-significant impact under CEQA and a minor adverse effect under NEPA.

4.1.3 Build Alternative 1 – Curb-Running BRT Alternative

The Curb-Running BRT Alternative would result in impacts similar to those described above for the TSM Alternative. To the extent this alternative increases bus vehicle service miles beyond what would occur under the TSM Alternative, it would result in a proportionately greater potential for operational hazardous materials impacts. However, the impacts/effects are still expected to be less than significant under CEQA and minor adverse under NEPA.

4.1.4 Build Alternative 2 – Median-Running BRT Alternative

The operational impacts of the Median-Running BRT Alternative would be similar to those described above for the Curb-Running BRT Alternative.

4.1.5 Build Alternative 3 – Low-Floor LRT/Tram Alternative

The Low-Floor LRT/Tram Alternative would include an MSF, which will use and store hazardous materials including fuels, lubricants, and paints, for maintenance of the rail vehicles. Compliance with federal, state, and local regulations, and adherence to Metro's standard operating procedures, would reduce operational impacts/effects to less than significant under CEQA and minor adverse under NEPA. Additionally, it should be noted that the Low-Floor LRT/Tram vehicles, unlike the bus vehicles in the BRT alternatives above, would be electrically powered and would not contain fuels (i.e., natural gas) that could be released to the environment in the event of an accident or mechanical failure.

4.1.6 Build Alternative 4 – LRT Alternative

The LRT Alternative would result in types of operational hazardous materials impacts that would be similar to those that would occur under the Low-Floor LRT/Tram Alternative. However, the tunnel and below grade stations, which are unique to this alternative, have the potential for vapor intrusion from soil and groundwater contamination, which would be a significant impact under CEQA and an adverse effect under NEPA.

4.2 Construction Impacts

4.2.1 No-Build Alternative

The No-Build Alternative would not result in any project-related construction along the project alignment. Therefore, there would be no construction impacts related to hazardous materials under this alternative.

4.2.2 TSM Alternative

The amount of construction that could occur under this alternative would be very minor and would be generally limited to minor roadway modifications and bus stop amenities/improvements. Consequently, it's unlikely that significant amounts of contaminated soil or groundwater would be encountered during construction. Therefore, potential construction impacts would be less than significant under CEQA and minor adverse under NEPA.

4.2.3 Build Alternative 1 – Curb-Running BRT Alternative

Construction of proposed improvements may encounter hazardous materials during grading and excavation within the ROW. The construction work associated with this alternative would generally be limited to within the upper 5 feet of soil. The ESA indicated that in or adjacent to the project ROW,

there are potential instances of LUSTs and hazardous substances from industrial activities. In addition, it is likely that lead and arsenic may have been deposited within the soil along the project alignment and may occur at hazardous levels. The risk of encountering hazardous materials is a potentially significant impact under CEQA and an adverse effect under NEPA. However, these impacts/effects would be eliminated or reduced to less than significant or minor adverse as a result of compliance with the requirements and design features and implementation of the mitigation measures described in Chapter 5.

In addition, dust created from construction activities may contain hazardous contaminants, a potentially significant impact under CEQA and adverse effect under NEPA.

Construction equipment contains fuel, hydraulic oil, lubricants, and other hazardous materials, which could be released accidentally during operation of the equipment, a potentially significant impact under CEQA and an adverse effect under NEPA. Compliance with federal, state, and local regulations, however, would reduce the impact to less than significant under CEQA and minor adverse under NEPA.

4.2.4 Build Alternative 2 – Median-Running BRT Alternative

The Median-Running BRT Alternative would result in similar construction impacts to the Curb-Running BRT Alternative.

4.2.5 Build Alternative 3 – Low-Floor LRT/Tram Alternative

The Low-Floor LRT/Tram Alternative would result in impacts similar to the Curb-Running BRT Alternative. Additional impacts that could occur include the potential for encountering groundwater contaminated by VOCs due to the deeper construction excavations for the retrofit or replacement of structures crossing the Pacoima Wash or the foundations for the new pedestrian crossing at the San Fernando Metrolink Station. The potential for encountering hazardous materials during construction under this alternative is a potentially significant impact under CEQA and an adverse effect under NEPA. These potential impacts/effects, however, can be reduced to a less-than-significant impact or minor adverse effect by complying with the requirements and design features and implementation of the mitigation measures described in Chapter 5.

The Low-Floor LRT/Tram Alternative would also include MSF and TPSS facilities, unlike the BRT alternatives described above. The ESA indicated historical land usage as auto repair facilities, waste transfer facilities, manufacturing, and other industrial purposes at the potential properties to be acquired for the proposed MSF and TPSS sites. During demolition of the existing structures, LBP and ACM may be encountered in waste building materials. The construction work for the proposed MSF and TPSS sites would generally include excavations in the upper 5 to 10 feet of soil and may encounter subsurface hazardous waste residue from spills or releases from the former facilities, a potentially significant impact under CEQA and an adverse effect under NEPA. Construction of the MSF and TPSS facilities would include removal of existing hazardous materials within the construction footprint. The removal, handling, and disposal of hazardous materials would be conducted in accordance with all applicable federal, state, and local regulations, and would comply with the design features and mitigation measures described in Chapter 5, which would reduce the potential impacts to less than significant under CEQA and minor adverse under NEPA.

4.2.6 Build Alternative 4 – LRT Alternative

The LRT Alternative would result in similar construction impacts to the Low-Floor LRT/Tram Alternative for the at-grade portions of the project. The cut and cover/tunneling portion of this alternative could consist of excavations as deep as 80 feet with piles extending deeper. The ESA indicated that adjacent to the project ROW, there are instances of LUSTs from former auto stations, and some of these facilities may extend into the project ROW because Van Nuys Boulevard may have been widened over time. Additionally, the proposed tunnel would cross beneath a portion of the former General Motors Plant and other manufacturing and industrial sites, which may contain soils containing hydrocarbons, VOCs, and other hazardous waste constituents. The possibility of encountering hazardous materials is a potentially significant impact under CEQA and an adverse effect under NEPA. However, these impacts would be reduced to less than significant with compliance with the requirements and design features and implementation of the mitigation measures described in Chapter 5.

In addition, on the southern end of the proposed tunnel, the structure would potentially be located below historically high groundwater levels, which may be contaminated with hazardous materials, a potentially significant impact under CEQA and adverse effect under NEPA. If groundwater is encountered during construction, any wastewater generated would require laboratory testing to determine appropriate disposal. Compliance with regulatory requirements and the mitigation measures described in Chapter 5 would reduce potential effects to less than significant or minor adverse.

4.3 Cumulative Impacts

The study area for the cumulative impacts discussion consists of the area within a quarter mile of the project ROW. That study area was identified because it has a high probability of capturing all areas that might be significantly affected by the combined impacts of the proposed and related projects. The cumulative impacts study area is also consistent with the project study area as defined in Chapter 1 and the area for which database searches were conducted to document potential RECs (see Chapter 3 above).

The study area is characterized by urban uses including industrial, commercial, residential, institutional, and infrastructures uses with few vacant parcels and limited open space. As a consequence, construction of other related projects could encounter soils or groundwater contaminated by current or historical uses. Similar to the project, disturbance of contaminated soils or groundwater could expose workers, the public, and environment to increased hazards and result in cumulative hazardous materials impacts. The extent of potential cumulative impacts would depend on the location and extent of construction, the level of any on-site contamination, as well as construction practices and methods. Since the TSM Alternative would result in very minimal construction, and the handling, treatment, and disposal of contaminated materials encountered by the proposed as well as related projects would be conducted in accordance with all applicable federal, state, and local regulations, it is highly unlikely that this alternative would contribute to any significant hazardous cumulative impacts. The BRT and LRT build alternatives would require more significant construction resulting in a higher probability that contaminated soils or groundwater would be encountered during construction. However, compliance with the regulatory requirements described in Chapter 2 and implementation of the additional measures described below in Chapter 5 would ensure that the combined effects of the build alternatives and related projects in the study area would be minimized and would be less than significant.

Chapter 5
Mitigation Measures

There are no substantial hazardous materials impacts that could not be fully addressed by the design or compliance requirements and or mitigation measures described below.

5.1 Compliance Requirements and Design Features

Compliance with federal, state, and local regulations governing the investigation, testing, handling, treatment, transport, and disposal of hazardous wastes and materials (see Chapter 2) would minimize potential impacts due to encountering hazardous materials. To ensure impacts are further minimized, the measures listed below are proposed.

5.2 Operational Mitigation Measures

No operational hazardous materials impacts were identified that will require mitigation measures for the BRT and Low-Floor LRT/Tram alternatives. For the LRT Alternative, the following measure is proposed.

HAZ-1 Engineering controls shall be implemented to increase ventilation in the below-grade structures, if vapor intrusion from soil and groundwater contamination is above regulatory levels.

5.3 Construction Mitigation Measures

HAZ-2 An environmental investigation shall be performed for the preferred alternative during design for above-grade or below-grade transit structures, stations, and the maintenance yard. The environmental investigation shall collect soil, groundwater, and/or soil gas samples to delineate potential areas of contamination that may be encountered during construction or operations.

HAZ-3 Dust control measures shall be performed during construction.

HAZ-4 Groundwater removed during construction shall be tested for potential presence of contamination and disposed of in accordance with state requirements.

HAZ-5 The contractor shall implement a Worker Health and Safety Plan.

HAZ-6 The contractor shall implement a Contaminated Soil/Groundwater Management Plan during construction.

HAZ-7 The contractor shall properly maintain equipment and properly store and manage related hazardous materials, so as to prevent motor oil, or other potentially hazardous substances used during construction, from spilling onto the soil. If contaminated soil is found, it shall be removed, transported to an approved disposal location, and remediated according to State law.

Additional measures to address the potential presence of hazardous materials along the project alignment will be confirmed as the project progresses into advanced design. Some of these design measures may be applicable to each build alternative. The measures to reduce impacts that are specific to each of the potential build alternative are provided below.

5.3.1 BRT and Low-Floor LRT/Tram Options

HAZ-8 The environmental investigation for the BRT and Low-Floor LRT/Tram options shall include the following:

- Properties potentially to be acquired are listed on multiple databases and shall be evaluated further for contaminants that were manufactured, stored, or released from the facility. If contaminated soil is found, it shall be removed, transported to an approved disposal location, and remediated according to State law.
- Phase II subsurface investigations for potential impacts from adjoining current or former UST sites and nearby LUST sites may be recommended pending the selection of the preferred corridor alternative, potential ROW acquisitions, the depth of excavation, and the result of a review of archives on file with the City of Los Angeles Fire Department (LAFD) and RWQCB.
- A Phase II subsurface investigation to evaluate potential presence of PCE shall be performed along the portions of the project alignment that are adjacent to former and current dry cleaners. If contaminated soil is found, it shall be removed, transported to an approved disposal location, and remediated according to State law.
- If construction encroaches into the two former plugged and abandoned dry-hole oil exploration wells mapped adjacent to the proposed project ROW, the project team shall consult with DOGGR regarding the exact locations of the abandoned holes and the potential impact of the wells on proposed construction.
- The locations of proposed improvements involving excavations adjacent to (within 50 feet of) the electrical substation shall be screened prior to construction by testing soils within 5 feet of the existing ground surface for PCBs. If contaminated soil is found, it shall be removed, transported to an approved disposal location, and remediated according to State law.
- Buildings that will be demolished shall have a comprehensive ACM inspection prior to demolition. In addition, ACM may be present in the existing bridge crossings at the Pacoima Diversion Channels. If improvements associated with the corridor alternative selected for final design will disturb the existing bridge crossings, then these structures shall be evaluated for suspect ACM. If ACM is found, it shall be removed, and transported to an approved disposal location according to State law.
- Areas along the project alignment where soil may be disturbed during construction shall be tested for ADL according to Caltrans ADL testing guidelines. If contaminated soil is found, it shall be removed, transported to an approved disposal location, and remediated according to State law.

- Lead and other heavy metals, such as chromium, may be present within yellow thermoplastic paint markings on the pavement. These surfacing materials shall be tested for LBP prior to removal. If contaminated soil is found, it shall be removed, transported to an approved disposal location, and remediated according to State law.
- Former railroad ROWs that crossed or were adjacent to the project ROW may contain hazardous materials from the use of weed control, including herbicides and arsenic, and may also contain TWW. Soil sampling for potentially hazardous weed control substances shall be conducted for health and safety concerns in the event that construction earthwork involves soil removal from the former railroad ROWs. If encountered during construction, railroad ties designated for reuse or disposal (including previously salvaged railroad ties in the project ROW) shall be managed or disposed of as TWW.

5.3.2 LRT Option

HAZ-9 The environmental investigation for the LRT Option shall include the studies identified for the BRT and Low-Floor LRT/Tram Options. In addition, the environmental investigation for the LRT Option shall include the following:

- If reconstruction of the Pacoima Wash bridge on San Fernando Road is proposed, the construction spoils (e.g., excavated soils, cuttings generated during installation of CIDH piles), including those in contact with the groundwater, shall be contained and tested for total chromium, 1,4-dioxane, trichloroethylene (TCE), and PCE to determine appropriate disposal.
- Phase II subsurface investigation shall be performed along the below-grade segment of the corridor to evaluate the need for environmental remediation measures during construction. The Phase II site investigation shall include the installation of groundwater monitoring wells for the tunneling portion of the alternative.
- An existing underground injection control well is located adjacent to the proposed tunnel along Van Nuys Boulevard for the LRT corridor alternative. The design team shall consult with California Department of Conservation to evaluate the potential impact of the well on the proposed improvements that could encounter groundwater and are located within ⅛ mile of the well.
- To evaluate for the presence of deeper soil contamination and VOCs in groundwater at cut and cover/tunnel excavation locations, soil borings shall be performed and groundwater monitoring wells shall be installed. Soil sampling shall include environmental screening for contamination by visual observations and field screening for VOCs with a photoionization detector (PID). Based on field screening, soil samples shall be analyzed for the suspected chemicals by a certified laboratory. Groundwater samples shall be analyzed for VOCs.
- A Contaminated Soil/Groundwater Management Plan shall be prepared during final design that describes appropriate methods and measures to manage contamination encountered during construction.

Chapter 6
Impacts Remaining After Mitigation

Implementation of the measures described above in Chapter 5 would eliminate, avoid, or reduce impacts to less than significant under CEQA and minor adverse under NEPA.

Chapter 7
CEQA Determination

The thresholds for determining the significance of impacts related to hazardous materials are identified in Chapter 3. There are no specific thresholds for these subject areas identified under NEPA.

7.1 No-Build Alternative

The No Build Alternative would result in no hazardous materials impacts.

7.2 Transportation Systems Management Alternative

The Transportation system management alternative would result in no or less-than-significant hazardous materials impacts.

7.3 Build Alternatives

The build alternatives could result in significant hazardous materials impacts. However, compliance with regulatory requirements and implementation of mitigation measures identified in Chapter 5 would avoid or reduce potential impacts to a less-than-significant level.

Chapter 8
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