



Metro®

Memorandum

Date: June 26, 2020

Subject: Addendum to the Cumulative Impacts Report for East San Fernando Valley Transit Corridor

Project Description:

The Federal Transit Administration (FTA) and Los Angeles County Metropolitan Transportation Authority (Metro) have initiated a Final Environmental Impact Statement (FEIS)/Final Environmental Impact Report (FEIR) for the East San Fernando Valley Transit Corridor Project (Project). The FEIS/FEIR 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).

In response to comments received on the Draft EIS/EIR (DEIS/DEIR), on June 28, 2018 the Metro Board of Directors formally identified a modified version of Alternative 4 (identified as "Alternative 4 Modified: At-Grade LRT" in the FEIS/FEIR) as the Locally Preferred Alternative (LPA). Factors that were considered by Metro in identifying Alternative 4 Modified: At-Grade LRT as the LPA include: the greater capacity of LRT compared to the BRT alternatives, the LPA could be constructed in less time and at reduced cost compared to the DEIS/DEIR Alternative 4, fewer construction impacts compared to DEIS/DEIR Alternative 4, and strong community support for a rail alternative. Additionally, Metro determined the LPA best fulfilled the project's purpose and need.

The LPA consists of a 9.2-mile, at-grade LRT with 14 stations. Under the LPA, the LRT would be powered by electrified overhead lines and would travel 2.5 miles along the Metro-owned right-of-way used by the Antelope Valley Metrolink line and Union Pacific Railroad from the Sylmar/San Fernando Metrolink Station south to Van Nuys Boulevard. As the LPA approaches Van Nuys Boulevard it would transition to and operate in the median of Van Nuys Boulevard for approximately 6.7 miles south to the Van Nuys Metro Orange Line Station. The 9.2-mile route of the LPA is illustrated in Figure 2-1 of the FEIS/FEIR. Additional details regarding the LPA's characteristics, components, and facilities are discussed within Section 2.2 of the FEIS/FEIR.

Methodology:

A review of the above-referenced project has been conducted in order to identify any additional potential cumulative impacts in the project study area as a result of the LPA. The project review was done according to CEQA/NEPA guidelines, as well as the most current FTA and Metro guidelines and policies.

Result:

ICF has reviewed the impacts of the LPA and has determined they are consistent with the findings the Cumulative Impacts Report prepared for the DEIS/DEIR. Please refer to Chapter 4 of the FEIS/FEIR for an updated discussion of existing conditions and LPA's impacts, as well as proposed mitigation measures.

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Acronyms and Abbreviations

AA	Alternatives Analysis
BRT	bus rapid transit
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
DEIR	Draft Environmental Impact Report
DEIS	Draft Environmental Impact Statement
EA	environmental assessment
FTA	Federal Transit Administration
GHG	greenhouse gas
LRT	light rail transit
LRTP	Long-Range Transportation Plan
Metro	Los Angeles County Metropolitan Transportation Authority
MSF	maintenance and storage facility
NEPA	National Environmental Policy Act
OCS	overhead contact system
RCP	Regional Comprehensive Plan
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SCAG	Southern California Association of Governments
SR	State Route
TPSS	traction power substation
TSM	Transportation System Management
U.S.C.	United States Code

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 project's public/community outreach component 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 in order to 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 Alternatives Analysis, most of Sepulveda Boulevard was eliminated as an alignment option, as well as the alignment extending to Lakeview Terrace. As a result of the Alternatives Analysis, modal recommendations were for BRT and 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 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 I-405, the Golden State Freeway I-5, the Ronald Reagan Freeway 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) Bus Rapid Transit 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
- Transportation Systems Management (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 Build Alternative 4 which includes a 2.5-mile segment within Metro-owned railroad right-of-way 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, expansions to the Metro Rapid bus system, upgrades to the Metrolink system and 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.

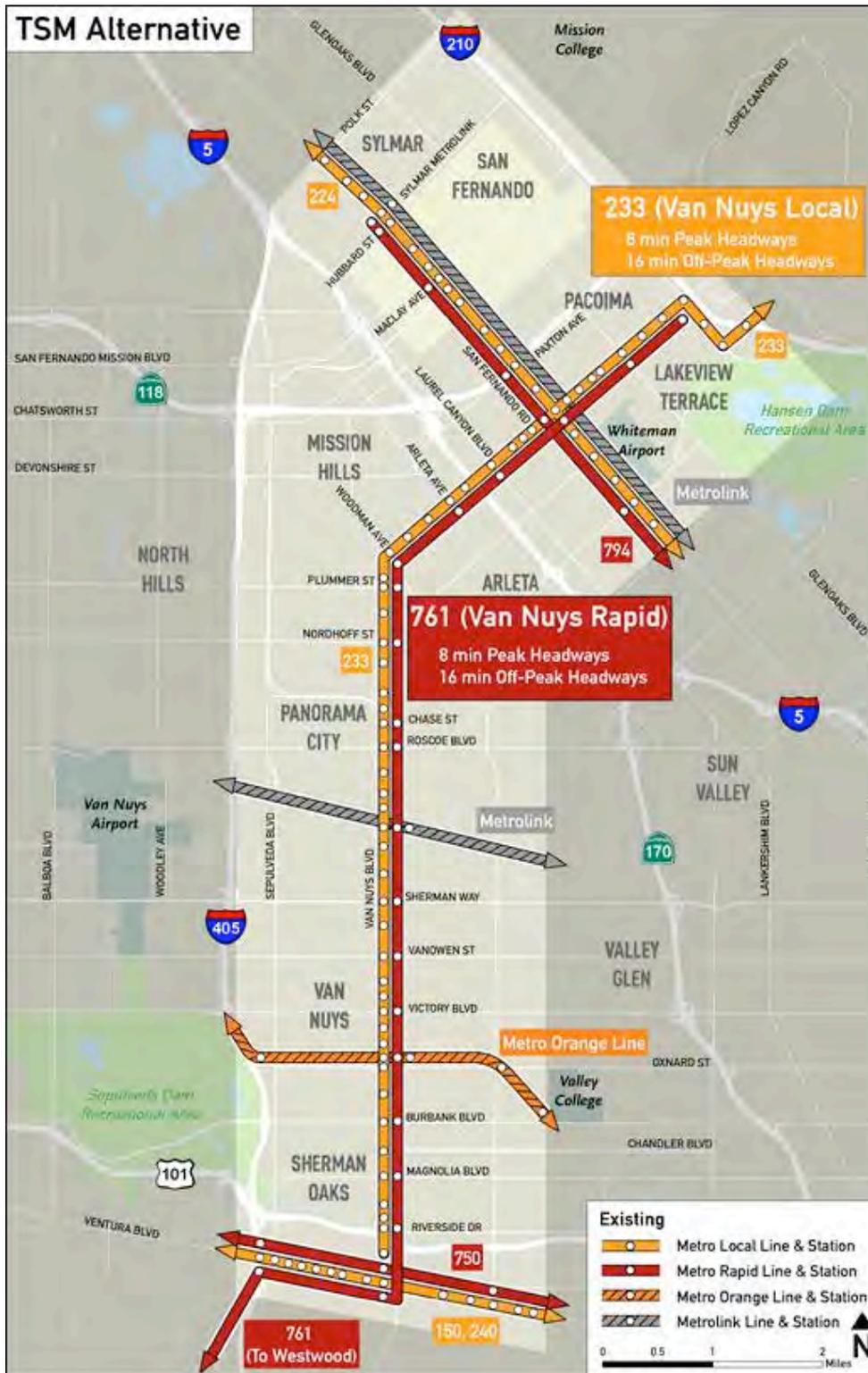
1.1.2.2 TSM Alternative

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:

Figure 1-1: TSM Alternative



Source: STV, 2014.

- 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.

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 dedicated 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 was re-routed to travel from Van Nuys Boulevard to Ventura Boulevard, and then to Reseda Boulevard, while a new Metro Rapid Line 788 travels 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 was re-routed to travel from Van Nuys Boulevard to Ventura Boulevard, and then to Reseda Boulevard, while a new Metro Rapid Line 788 travels 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 similar travel speed as 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. Thus, Metro Rapid Line 761 (referred to as 761S with reduced service) would operate only between the Metro Orange Line and Westwood, and Metro Local Line 233 (referred to as 233S with reduced service) would operate only between San Fernando Road and Glenoaks Boulevard. It should be noted that in December 2014 the Metro Rapid Line 761 was re-routed to travel from Van Nuys Boulevard to Ventura Boulevard, and then to Reseda Boulevard, while a new Metro Rapid Line 788 travels from Van Nuys Boulevard through the Sepulveda Pass to Westwood as part of a Metro demonstration project.

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 Build Alternative 4 – LRT Alternative

Similar to the Low-Floor LRT/Tram Alternative, the LRT alignment 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 adjacent to 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 includes a segment in exclusive right-of-way through the Antelope Valley Metrolink railroad corridor, a segment with semi-exclusive right-of-way 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 approximate 3/4-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.

2.1 Regulatory Framework

2.1.1 Federal Regulations

The Council on Environmental Quality's (CEQ) regulations (40 CFR 1500 – 1508) implementing the procedural provisions of the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S.C. 4321 et seq.), define cumulative effects as an impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions, [where] cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

The CEQ's "Considering Cumulative Effects Under the National Environmental Policy Act" provides a framework for advancing environmental impact analysis by addressing cumulative effects in either an environmental assessment (EA) or environmental impact statement (EIS). According to the CEQ handbook, the process of analyzing cumulative effects can be thought of as enhancing the traditional components of an environmental document by (1) scoping, (2) describing the affected environment, and (3) determining the environmental consequences. Scoping allows NEPA practitioners to evaluate resource impact zones and the life cycle of effects rather than projects, properly bounding the cumulative effects analysis. Describing the affected environment provides a baseline and thresholds of environmental change that are important for analyzing cumulative effects. Determining the cumulative environmental consequences of an action requires delineating the cause-and-effect relationships between the multiple actions and the resources, ecosystems, and human communities of concern. The significance of cumulative effects depends on how they compare with the environmental baseline and relevant resource thresholds (such as regulatory standards).

The CEQ handbook does not establish requirements for such analyses. It does not contain official guidance nor is it intended to be legally binding. Certain federal agencies have independently developed procedures and methods to analyze the cumulative effects of their actions on environmental resources.

2.1.2 State Regulations

CEQA requires an environmental impact report to evaluate a project's contribution to cumulative impacts. Cumulative impacts are the project's impacts combined with the impacts of the related past, present, and reasonably foreseeable future projects. Cumulative impacts discussions for each environmental topic area are provided in this document. As stated in CEQA, Title 14, Section 21083 (b)(2), a project may have a significant effect on the environment if the "possible effects of a project are individually limited but 'cumulatively considerable.' As used in this paragraph, 'cumulatively considerable' means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past, projects, the effects of other current projects, and the effects of probable future projects." State CEQA Guidelines Section 15130(b) states that the

discussion of cumulative impacts can be either “a list of past, present, and probably future projects” or a “summary of projections contained in an adopted local, regional, or statewide plan, or related planning document that describes or evaluates conditions contributing to the cumulative effect.”

The cumulative impact analysis in this DEIS/DEIR uses both the summary of projections approach and related projects list, depending on the impact area. The appropriate adopted planning document is the SCAG 2012–2035 RTP/SCS. However, SCAG is currently updating the RTP/SCS to reflect the years 2016–2040. The 2016–2040 timeframe for projections is more appropriate than the 2012–2035 timeframe because it more closely resembles the estimated operational date for this project. Therefore, for purposes of this DEIS/DEIR, the modeling and calculations for cumulative impacts used throughout the analyses reflect a 2040 horizon year.

Chapter 3

Affected Environment/Existing Conditions

3.1 Study Area

For the purposes of this analysis, the general study area used for the determination of cumulative impacts includes parts of the City of San Fernando and the communities of Mission Hills, Pacoima, Arleta, Panorama City, and Van Nuys. The general study area boundaries include the Santa Monica Mountains (just north of Foothill Boulevard) to the North, Polk Street and Sepulveda Boulevard to the West, just south of Ventura Boulevard on the South, and Fulton Avenue and Branford Street to the East. These boundaries are thought to encompass all past, present, and reasonably foreseeable projects (with impacts related to the proposed project) near the proposed project and alignment. Related projects located within the general study area are listed in Table 3-1 and depicted in Figure 3-1. If the study area for a particular resource area differs from the general study area, that study area is identified in the relevant section below.

Detailed descriptions of the affected environment/existing conditions for each of the resource areas (visual and aesthetics; air quality; cultural resources; ecology and biology; etc.) can be found in the individual technical studies prepared for each resource area. An overview of the affected environment within the study defined above is provided below.

The study area is located in the San Fernando Valley area of Los Angeles. The San Fernando Valley is a flat area consisting of approximately 260 square miles, and is bounded by the Santa Susana Mountains to the northwest, the Simi Hills to the west, the Santa Monica Mountains and Chalk Hills to the south, the Verdugo Mountains to the east, and the San Gabriel Mountains to the northeast. The San Fernando Valley is an urbanized area that includes a variety of land uses, including residential, commercial, institutional, and light industrial development. The project corridor is approximately 9.2 miles in length, and runs nearly the entire north/south length of the valley floor.

The project corridor is currently designated with the following transportation uses:

- Within the project corridor, Van Nuys Boulevard is designated as a Major Class II Highway.¹ This type of street is defined as having four full-time through lanes, as well as two lanes that are for parking on a part-time basis and for travel on a part-time basis.
- The Metro Orange Line is designated for public facilities on the City of Los Angeles General Plan Land Use Map.
- Within the project corridor, San Fernando Road is classified as a secondary arterial corridor.² This type of roadway typically directs traffic through individual districts in the San Fernando Corridors Specific Plan area.

¹ City of Los Angeles. 2002a. *City of Los Angeles General Plan Transportation Element, Highways and Freeways, North Valley Subarea, Map A2*. June. Available: <<http://cityplanning.lacity.org/cwd/gnlpln/transelt/TEMaps/A2NVly.gif>>. Accessed: February 12, 2013.

² City of San Fernando. 2005. *The San Fernando Corridors Specific Plan*. Adopted January. Available: <http://www.ci.san-fernando.ca.us/sfold/news/specific_plan/sf_corridors_sp_final.pdf>. Accessed: February 13, 2013.

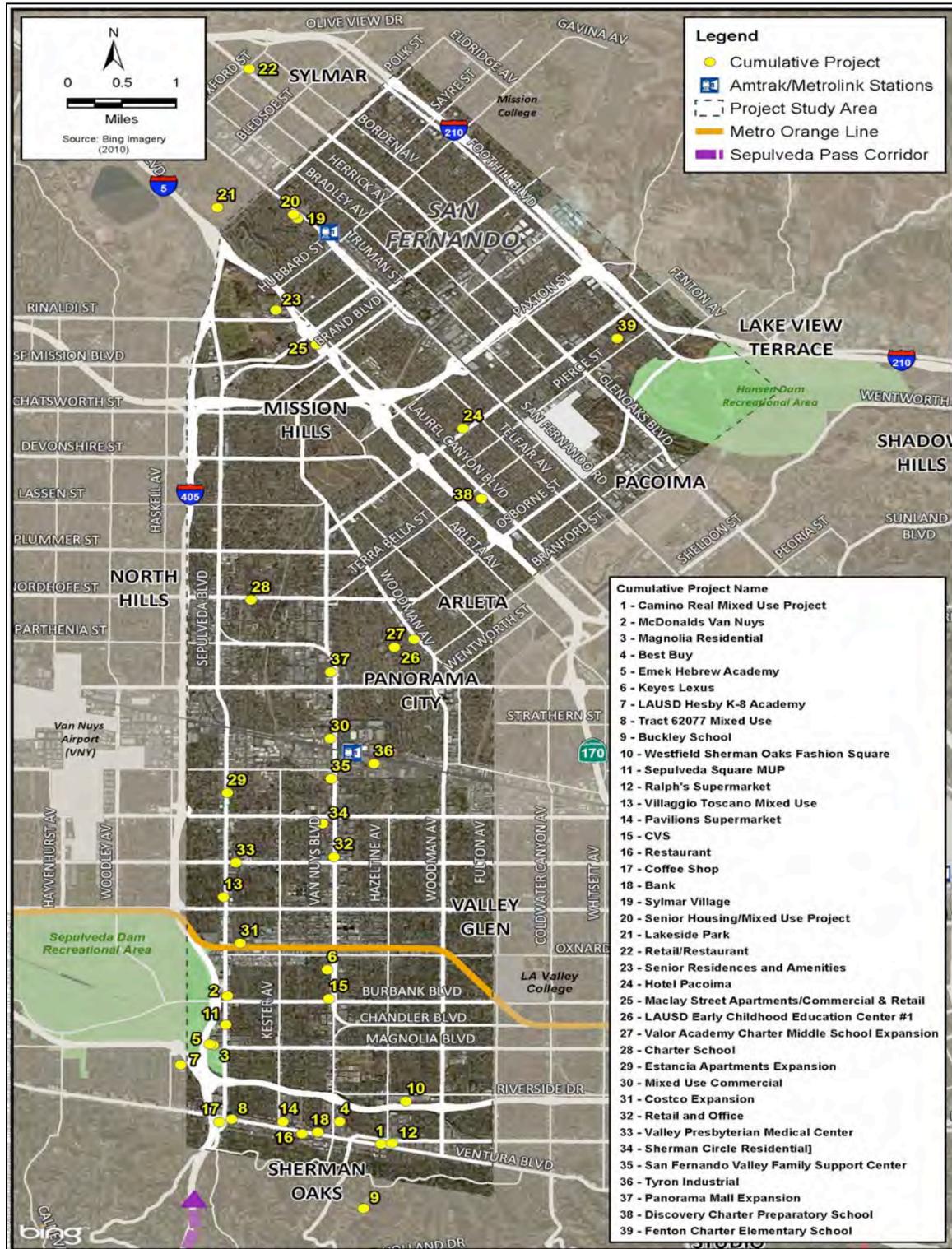
Table 3-1: Cumulative Projects

Map Reference No.	Status	Project Title	Project Description/Scope	Project Location
1	Completed	Camino Real Mixed Use Project	Demolition of 7,000 sf of commercial uses. Proposed condominium and retail uses.	14121 Ventura Blvd.
2	Pre-construction	McDonalds Van Nuys	2,437 sf fast food with drive thru	5628 Sepulveda Blvd.
3	Completed	Magnolia Residential	Proposed 98 apartments	15357 Magnolia Blvd
4	Completed	Best Buy	60,000 sf electronics store	4500 Van Nuys Blvd
5	Completed	Emek Hebrew Academy	225 student enrollment increase	15365 Magnolia Blvd
6	Completed	Keyes Lexus	Proposed car dealership	5855 Van Nuys Blvd
7	Completed	LAUSD Hesby K-8 Academy	528 K-8 students in academy school to replace old school site	15530 Hesby St
8	Completed	Tract 62077 Mixed Use	52 condominiums plus 7,460 sf specialty retail	15222 Ventura Blvd
9	Completed.	Buckley School	Addition to existing school	3900 Stansbury Avenue
10	Under Construction	Westfield Sherman Oaks Fashion Square	Expansion of existing shopping center	14006 Riverside Dr
11	Pre-construction	Sepulveda Square MUP	97 condo units/34,775 sf retail	5700 N Sepulveda Blvd
12	Constructed	Ralphs Supermarket	Supermarket	14049 Ventura Blvd
13	Pre-construction	Villaggio Toscano Mixed Use	500 apartment units	4805 N Sepulveda Blvd
14	Constructed	Pavilions Supermarket	supermarket	14845 Ventura Blvd
15	Constructed	CVS	12,830 sf pharmacy with drive-thru	5601 Van Nuys Blvd
16	Constructed.	Restaurant	restaurant	14708 Ventura Blvd
17	Pre-construction	Coffee shop	Coffee shop	15315 Dickens St.
18	Pre-construction	Bank	7,000 sf bank to replace 7,000 sf office	14601 Ventura Blvd
19	Pre-construction	Sylmar Village	246 condo units, 9,000 sf retail,9,000 office building	12385 San Fernando Rd
20	Pre-construction	Senior housing/mixed use project	150 senior housing units, 25,000 sf medical office	12415 San Fernando Rd

Map Reference No.	Status	Project Title	Project Description/Scope	Project Location
21	Pre-construction	Lakeside Park	Development of a 36-acre park with five baseball fields and four full-size soccer fields, a skate plaza, office space, and parking lots.	15300 W Lakeside St
22	Pre-construction	Retail/Restaurant	7,486 sf retail/restaurant	13530 Glenoaks Blvd
23	Pre-construction	Senior Residences and amenities	1,250 units of senior residences and amenities	11570 N Indian Hills
24	Pre-construction	Hotel Pacoima	44-room hotel development	13535 Van Nuys Blvd
25	Completed	Maclay Street Apartments/Commercial & Retail	141 units and 10,115 sf commercial space	13260 W Maclay St
26	Completed	LAUSD Early Childhood Education Center #1	175 seats for pre-K to 2 nd grade	8605 Colbath Ave
27	Completed	Valor Academy Charter Middle School Expansion	Charter middle school expansion	8755 Woodman Ave
28	Pre-construction	15136 Nordhoff Street Charter School	Charter school	15136 Nordhoff St
29	Completed	Estancia Apartments Expansion	77 additional apartments	6640 N Sepulveda Blvd
30	Pre-Construction	Mixed Use Commercial & Fire Station	Fire Station and Office/Retail Commercial Space	14450 Arminita St
31	Pre-Construction	Costco Expansion	13,221 sf addition	6100 N Sepulveda Blvd
32	Completed	Retail and Office	100 apartments, 13,000 sf, retail	6828 Van Nuys Blvd
33	Completed	Valley Presbyterian Medical Center	79,127 sf office building	15225 Vanowen St
34	Under Construction	Sherman Circle Residential	355-unit apartment building	14500 W Sherman Circle
35	Under Construction	San Fernando Valley Family Support Center	Relocation of County Services building	7515 Van Nuys Blvd
36	Pre-construction	Tyrone Industrial	283,920 sf light industrial uses	7600 Tyrone Ave
37	Pre-Construction	Panorama Mall Expansion	Expansion of existing mall	8401 Van Nuys Blvd
38	Pre construction	Discovery Charter Preparatory School	Proposed 400-student private high school	9989 Laurel Canyon Blvd
39	Completed	Fenton Charter Elem School	Relocation and expansion of existing school	11351 Dronfield Ave

Source: KOA and ICF International, 2015.

Figure 3-1: Cumulative Projects



Source: ICF International, 2015.

- Truman Street is classified as a major arterial corridor for its entire length through San Fernando.³ This type of roadway serves both regional through-traffic and inter-city traffic.
- The Antelope Valley Metrolink railroad corridor is shown as a railroad corridor in the San Fernando Corridors Specific Plan.

Land uses vary along the project corridor, and include residential, commercial, industrial, recreation (parks), schools, community centers, and other urban uses.

Land uses to the east and west of the project corridor, but within the study area, are primarily designated as residential and parklands. The project corridor crosses under several roadways/highways and railroad tracks, and crosses over the Los Angeles River (LA River). Power lines, streetlights, and other utilities are located along various portions of the project corridor.

At the southern end of the project corridor to just south of Calvert Street, land uses include car dealerships on Auto Row and other commercial uses. Moving further north until Vanowen Street, commercial, retail, banks, restaurants, medical offices, and other businesses occupy the corridor. A portion of this segment also includes local, state, and federal government buildings, including the Van Nuys Civic Center. South of Titus Street, a mixture of retail, restaurant, and other businesses interspersed with parking lots occupies the land adjacent to Van Nuys Boulevard.

South of Parthenia Street, commercial businesses are located along Van Nuys Boulevard, as well as commercial centers and the Panorama Mall. South of the I-5 freeway, land uses include small to medium residential apartment complexes and single-family homes. At the north end of the project corridor, along San Fernando Road and Truman Street, the land uses are primarily commercial and industrial.

³ City of San Fernando. 2005. *The San Fernando Corridors Specific Plan*. Adopted January. Available: <http://www.ci-san-fernando.ca.us/sfold/news/specific_plan/sf_corridors_sp_final.pdf>. Accessed: February 13, 2013.

This chapter discusses whether the impacts that could occur under each alternative, when combined with impacts that would result due to the implementation of the related projects (see Table 3-1 in Chapter 3) or projected growth and development would be cumulatively considerable or significant.

4.1 No-Build Alternative

Under the No-Build Alternative, none of the improvements or facilities that are proposed under the TSM or build alternatives (Alternatives 1 to 4) would occur. Because the No-Build Alternative proposes no new construction or facilities, it would not result in new construction or operational impacts; therefore, it would not contribute to any cumulative impacts that would occur due to the related projects or projected growth and development in the study area.

4.2 Transportation System Management Alternative

4.2.1 Cumulative Impacts

4.2.1.1 Land Use

The study area for the cumulative impacts analyses encompasses the area in the immediate vicinity of the corridor as well as the local land use plan areas in which the project is located. During construction and operation, the TSM Alternative would not conflict with land use plans or policies, would not divide an established community, and would not be incompatible with nearby land uses; therefore, the TSM Alternative would not contribute to any significant cumulative land use impacts.

4.2.1.2 Real Estate and Acquisitions

The TSM Alternative would not result in adverse construction impacts. Therefore, it would not contribute to any cumulative impacts.

4.2.1.3 Economic and Fiscal Impacts

The TSM Alternative would not require acquisition of properties and consequently would not result in direct adverse effects that could contribute to cumulative adverse economic and fiscal impacts.

4.2.1.4 Communities and Neighborhoods

The TSM Alternative would result in very minor adverse or beneficial impacts on communities and neighborhoods. Therefore, it would not contribute in any appreciable way to cumulative impacts that could occur due to implementation of other projects in the study area. Consequently, the TSM Alternative would not result in or contribute to significant cumulative community and neighborhood impacts.

4.2.1.5 Visual Qualities and Aesthetics

The TSM Alternative would have no or negligible adverse effects on visual qualities and aesthetics. As a consequence, the TSM Alternative would not contribute in any appreciable way to cumulative impacts on visual and aesthetic resources that might occur due to other projects in the study area. Therefore, the TSM Alternative would not result in a cumulatively considerable contribution to a significant cumulative impact.

4.2.1.6 Air Quality

The South Coast Air Basin is the study area for evaluation of cumulative impacts for air quality. The South Coast Air Quality Management District (SCAQMD) is responsible for managing the Basin's air resources and bringing the Basin into attainment for federal and state air quality standards. Given the TSM Alternative would result in no or negligible increases in pollutant emissions in the Basin, it would not appreciably contribute to any cumulative air quality impacts.

4.2.1.7 Climate Change

GHG emissions and climate change are exclusively cumulative impacts; there are no non-cumulative GHG emissions impacts from a climate change perspective. Climate change is the result of cumulative global emissions. No single project, when considered in isolation, can cause climate change because a single project's emissions are not enough to change the radiative balance of the atmosphere. Because climate change is the result of GHG emissions and GHGs are emitted by innumerable sources worldwide, global climate change will have a significant cumulative impact on the natural environment as well as human development and activity. As such, GHGs and climate change are cumulatively considerable, even though the contribution may be individually limited (SCAQMD 2008). SCAQMD methodology and thresholds are thus cumulative in nature.

The TSM Alternative would not exceed the GHG threshold of significance and would be consistent with adopted plans and regulations to reduce GHG emissions. Therefore, the TSM Alternative would not contribute to a cumulatively significant impact related to GHG emissions and climate change.

4.2.1.8 Noise and Vibration

The study area for the cumulative impacts analysis encompasses the area along the project corridor where project construction or operational noise and vibration could be perceptible at nearby uses. For cumulative construction noise impacts, this area would extend approximately 500 feet from the construction area. For construction vibration impacts, the cumulative impacts study area would extend 50 feet. For operational cumulative noise impacts, this area would extend approximately 250 feet from the roadway and for operational vibration impacts the area would extend 50 feet.

Under the TSM Alternative, only very minor construction activities would occur, which would be limited to specific locations (e.g., bus stops) within the roadway right-of-way. Additionally, construction would occur only during daytime hours, and would be short in duration. Therefore, it's anticipated the TSM Alternative would result in no adverse construction noise or vibration impacts. As a consequence, the TSM Alternative would not contribute to any significant cumulative noise and vibration impacts within the cumulative impacts study area.

Operation of the TSM Alternative would most likely result in a less than 1-decibel increase in noise levels, which is a less-than-significant project impact. Since roadway noise is the primary source of noise in the corridor, increases in roadway traffic volumes over time due to cumulative growth and

development could also increase ambient noise levels in the area. However, noise generated by the TSM Alternative and future increases in roadway traffic are expected to result in a less than 2-decibel increase in community noise levels. This estimated increase would not be significant.

A possibly significant source of future noise along the San Fernando Road portion of the corridor is the California High-Speed Rail (CAHSR) Project. The SCAG RTP/SCS planning document identifies the CAHSR Project as a project that may be completed and operational before the 2040 Horizon Year. However, the CAHSR Project may be located in the Metrolink ROW and the less-than significant noise impact from the TSM alternative would be limited to sensitive receivers along Van Nuys Boulevard. Therefore, the TSM alternative would not contribute to any significant cumulative noise impacts along San Fernando Road.

The TSM Alternative would result in no adverse vibration impacts; therefore, it would not contribute to any cumulative vibration impacts.

4.2.1.9 Geology and Soils

In general, geologic hazards are site specific and consequently, it's unlikely that related and proposed projects would contribute to cumulative geological hazards impacts. One exception would be when subsurface excavations result in ground and differential settlement that could affect adjacent properties. If other nearby projects would also include excavation activities that could result in the potential settlement of soils, then the proposed and nearby projects could result in adverse cumulative settlement impacts on nearby properties. However, given the limited amount of construction that is anticipated to occur under the TSM Alternative, it's unlikely this alternative would result in cumulative ground and differential settlement impacts.

4.2.1.10 Hazardous Waste and Materials

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.

4.2.1.11 Energy

With the exception of instances in which projects require the physical development of new power generation, transmission, or fueling facilities, energy use impacts are cumulative impacts in that all energy consumed comes from a common resource pool. No new power generation, transmission, or fueling facilities would be required for implementation of the proposed project. The study area for cumulative energy impacts generally consists of the service areas of the energy providers that would serve proposed project facilities.

Electricity

Under the TSM Alternative (and the BRT alternatives) the extent of new facilities that would require electricity would be minimal and may include new lighting at bus stops or electronic signage and fare machines (Alternatives 3 and 4 would include a new MSF and fixed guideway vehicle propulsion systems, which would consume more substantial amounts of electricity). Minor amounts of electricity would be consumed during construction due to the limited extent of improvements proposed under the TSM Alternative.

The LADWP 2014 Power Integrated Resource Plan was used for this cumulative electricity impact analysis. The resource study area is the LADWP service area covered by the plan, which includes the City of Los Angeles and surrounding areas.⁴ The LADWP 2014 Power Integrated Resource Plan projects future energy demand in the LADWP service area. LADWP sales, net energy for load forecasting, peak demand forecast, and hourly allocation are based on:

- An economic forecast of Los Angeles County from the Los Angeles Modeling Group of the University of California, Los Angeles (Anderson Forecast Project);
- Demographic information from the California Department of Finance, Demographic Research Unit; and
- A construction forecast from McGraw-Hill construction services.

LADWP has been contacted regarding the energy requirements of fixed guideway vehicle service for rail Alternatives 3 and 4. It is anticipated that forecasting efforts have allowed for new energy consumption levels sufficient to meet the demands of fixed guideway transit vehicle propulsion. However, increased electricity consumption associated with the proposed project in combination with future projects within LADWP's service area may require new electricity transmission infrastructure or the rehabilitation of existing electricity infrastructure to meet that increased demand and maintain adequate levels of service, notwithstanding future savings resulting from increased energy efficiencies. Although regional utility providers have planned for long-term increases in demand, new supply and delivery infrastructure facilities could be required to meet increased regional demands, the construction of which could result in impacts to the environment. Where energy providers, such as LADWP, have identified specific individual projects that are required to meet future projected regional cumulative demands and determined that construction or operation of those projects would result in significant impacts to the environment, then the cumulative impact of the proposed project and the LADWP infrastructure projects would be considered significant. However, where the extent and details of future infrastructure improvements and their impacts have not been identified, the significance of potential cumulative impacts cannot be definitively determined and it would be speculative⁵ to assume the cumulative impacts would be significant.

Gasoline and Diesel Fuel

Direct diesel and gasoline consumption would result from the use of construction vehicles and equipment as well as from employee and maintenance trips during operation. Indirect fuel consumption would result from redistribution of trips that would occur from capacity changes along the proposed alignment. The TSM alternative and the other build alternatives with the exception of Alternative 4 would result in increased fuel use compared to the No-Build Alternative. The proposed project, in combination with regional population growth, and more people traveling by motor vehicles, additional gasoline and diesel fuel infrastructure may be required to meet motor vehicle fuel demands in the future. Such increases may be at least partially offset by increasing fuel economy standards for vehicles, but new supply and delivery infrastructure facilities could be required to meet increased regional demand, the construction of which could result in impacts to the environment. Where fuel providers have identified specific individual projects that are required to meet future projected regional cumulative demands and determined that construction or operation of those projects would result in significant impacts to the environment, then the cumulative impact of the

⁴ LADWP's overall service area includes parts of the Owens Valley, but because of the limited developable land and slow rates of growth, energy forecasts are not considered in the *2012 Power Integrated Resource Plan* (LADWP 2012:A-2).

⁵ According to Section 15145. SPECULATION, of the State CEQA Guidelines, "If, after thorough investigation, a Lead Agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact."

proposed project and the fuel infrastructure projects would be considered significant. However, where the extent and details of future infrastructure improvements and their impacts have not been identified, the significance of potential cumulative impacts cannot be definitively determined and it would be speculative to assume the cumulative impacts would be significant.

Natural Gas

Natural gas would be consumed by Metro buses during and following construction and may be consumed by some construction equipment and during operation of project facilities (e.g., the MSF under Alternatives 3 and 4). Net increases in natural gas consumption would occur under the TSM Alternative (as well as Alternatives 1 and 2). The proposed project, in combination with increasing demand for natural gas due to projected regional population growth, may require new or expanded natural gas infrastructure. Such increases in demand may be at least partially offset by increased energy efficiency of buses, buildings, and other users of natural gas, but new supply and delivery infrastructure facilities could be required to meet increased regional demand, the construction of which could result in impacts to the environment. Similar to the discussion above for electricity and gasoline and diesel fuel, where natural gas providers have identified specific individual projects that are required to meet future projected regional cumulative demands and determined that construction or operation of those projects would result in significant impacts to the environment, then the cumulative impact of the proposed project and the natural gas infrastructure projects would be considered significant. However, where the extent and details of future infrastructure improvements and their impacts have not been identified, the significance of potential cumulative impacts cannot be definitively determined and it would be speculative to assume the cumulative impacts would be significant.

4.2.1.12 Ecosystems and Biological Resources

The TSM Alternative would result in no or very minor construction impacts/effects and no operational impacts or effects on ecosystems and biological resources. As a consequence, it would not contribute to any significant cumulative impacts.

4.2.1.13 Hydrology and Water Quality

The TSM Alternative would result in no or very minor adverse water resources, hydrological, or water quality impacts. Therefore, it would not result in any meaningful contributions to cumulative impacts in these areas, and no further discussion is required.

4.2.1.14 Safety and Security

The study area for cumulative impacts is the same as the project study area. The related projects in the study area, which provide the basis for the cumulative impacts analysis, consist primarily of various types of development projects. These related projects would not result in significant airport safety hazards or expose persons to wildland fire hazards. However, these projects could increase the demand for emergency and private security services, although it's not known whether the increased demand would require the construction of new facilities that would result in significant impacts on the environment. The extent to which these projects would interfere with an adopted emergency response or evacuation plan would depend largely on the amount of additional traffic and resulting increase in congestion that would occur as a result of the related projects. However, because the TSM Alternative would consist of low-cost transit service improvements and very minor physical improvements, which could have a beneficial operational effect on congestion, and no or minimal other safety and security impacts, it would not contribute to any significant adverse safety and security cumulative impacts.

4.2.1.15 Parklands and Community Facilities

The TSM Alternative would have no or negligible adverse effects on parklands and community facilities. As a consequence, the TSM Alternative would not contribute in any appreciable way to cumulative impacts on parklands and community facilities that might occur due to other projects in the study area. Therefore, the TSM Alternative would not result in a cumulatively considerable contribution to a significant cumulative impact.

4.2.1.16 Historic, Archaeological, and Paleontological Resources

Historic Resources

Under the TSM Alternative, there would be no adverse effects under Section 106 to historic properties; therefore, this alternative would not contribute to cumulative impacts on the historic properties identified as part of this study that might occur due to other proposed or planned projects in the study area.

Archaeological Resources

Under the TSM Alternative, there would be no adverse effects under Section 106 to archaeological resources; therefore, this alternative would not contribute to cumulative impacts on the historic properties identified as part of this study that might occur due to other proposed or planned projects in the study area.

Paleontological Resources

Under the TSM Alternative, there would be no adverse effects to paleontological resources; therefore, this alternative would not contribute to cumulative impacts on paleontological resources that might occur due to other planned or proposed projects in the study area.

4.2.1.17 Environmental Justice

The TSM Alternative would not result in effects on minority and low-income populations; therefore, this alternative would not contribute to cumulative impacts on environmental justice communities.

4.2.1.18 Growth-Inducing Impacts

Since the TSM Alternative consists primarily of low-cost transit service improvements and would include only minor physical improvements to the transportation network, it would not induce growth and consequently would not contribute to any cumulative growth inducement effects.

4.3 Build Alternative 1 – Curb-Running Bus Rapid Transit Alternative

4.3.1 Cumulative Impacts

4.3.1.1 Land Use

The study area for the cumulative impacts analyses encompasses the area in the immediate vicinity of the corridor as well as the local land use plan areas in which the project is located. During construction, this alternative would result in minor adverse effects under NEPA, and impacts that are

less than significant under CEQA due to a temporary reduction in mobility from traffic detours and street, lane, and sidewalk closures. With the implementation of a Traffic Management Plan and a Construction Phasing and Staging Plan, these temporary effects and impacts would be further reduced. As a consequence and because impacts would be temporary, the proposed project combined with other related projects in the study area, are not expected to result in significant cumulative construction impacts/effects under CEQA and NEPA.

Alternative 1 would result in beneficial operational effects by increasing connectivity within the eastern San Fernando Valley area, increasing transit ridership and mobility, and reducing overall vehicle miles and hours traveled. However, Alternative 1 could also result in localized traffic impacts at 16 of 73 study intersections. As a consequence, the proposed project and other related projects in the area that generate additional traffic could cumulatively conflict with local land use plan goals and policies to reduce congestion, a potentially significant impact under CEQA.

4.3.1.2 Real Estate and Acquisitions

Alternative 1 would not require the permanent acquisition of any property within the study area and thus it would not result in construction (or operational) real estate/acquisition impacts. Therefore, it would not contribute to any cumulative real estate and acquisitions impacts.

4.3.1.3 Economic and Fiscal Impacts

The Curb-Running BRT Alternative would not require acquisition of properties and consequently would not result in direct adverse effects that could contribute to cumulative adverse economic and fiscal impacts. The indirect economic and fiscal effects due to the Curb-Running Build Alternative would be minimal and can be further reduced with implementation of mitigation measures; therefore, the Curb-Running Alternative would not contribute to any significant adverse cumulative fiscal and economic impacts.

4.3.1.4 Communities and Neighborhoods

The study area for the cumulative impacts analysis consists of the communities and neighborhoods that would be affected by the proposed project. In general, the cumulative impacts study area encompasses the neighborhoods and communities adjacent to the project corridor.

During construction, Alternative 1 could result in temporary adverse effects and significant impacts on mobility, access, bicycle and pedestrian safety, emergency response, visual character and quality, noise, and air quality. Construction impacts would be reduced or minimized through construction management and abatement measures, as described in the Visual Quality and Aesthetics; Air Quality; Noise and Vibration; Safety and Security; and Transportation, Transit, Circulation, and Parking technical studies. In addition, these effects and impacts would be short-term and temporary, and with the implementation of mitigation measures, these effects and impacts would be reduced to levels that are less than cumulatively considerable under NEPA and CEQA.

During operation, Alternative 1 would have some beneficial long-term effects under NEPA, and impacts would be beneficial and less than significant under CEQA, related to regional mobility, access, and social and economic conditions because this alternative would improve connections to public transportation, improve access to businesses and community resources, and increase community cohesion and interaction. By increasing transit ridership, Alternative 1 would reduce traffic congestion over the long-term operation of the project and would consequently facilitate response times for police and fire protection services. These community and neighborhood benefits

would be beneficial and less than cumulatively considerable under NEPA and CEQA. However, as discussed in Chapter 2, the reduction in roadway capacity due to conversion of the curb lanes to dedicated BRT lanes would result in significant traffic impacts at local intersections. Therefore, the cumulative impacts on local traffic circulation would be significant.

Alternative 1 could result in a substantial adverse effect under NEPA and potentially significant impact under CEQA related to access and safety from the potential for bicycle and vehicle collisions, which would remain after implementation of proposed mitigation measures. This potentially substantial adverse effect and significant impact, combined with the impacts of other related projects in the project study area (e.g., housing and mixed-use development) that could increase traffic and reduce bicycle safety, could be cumulatively considerable.

4.3.1.5 Visual Qualities and Aesthetics

The study area for cumulative visual impacts consists of those areas that have views of the project corridor and those areas that can be seen from locations along the project corridor.

During construction, Alternative 1 would result in temporary adverse effects on visual and aesthetic resources. Construction impacts would be minimized or mitigated through mitigation measures (see the Visual and Aesthetics Impacts Report), and would be reduced to levels that are less than cumulatively considerable.

Operational impacts would be minor adverse, or minor and beneficial under NEPA, and less than significant and beneficial under CEQA. Because views in the corridor as a whole would not be substantially affected, operational impacts would be less than cumulatively considerable.

4.3.1.6 Air Quality

California is divided geographically into 15 air basins for the purpose of managing the air resources of the state on a regional basis. Each air basin generally has similar meteorological and geographic conditions throughout. Local districts are responsible for preparing the portion of the SIP applicable within their boundaries.

The proposed project is located in the South Coast Air Basin; and as such, the Basin is the appropriate study area for evaluation of cumulative impacts for air quality. SCAQMD is responsible for managing the Basin's air resources and for bringing the Basin into attainment for federal and state air quality standards. To achieve this goal, the SCAQMD prepares/updates the Basin's AQMP every 4 years.

The "on-road emissions" AQMP budgets are developed based on the regional transportation planning documents that are prepared by SCAG. **The proposed project is included in the SCAG 2012–2035 RTP/SCS and SCAG 2015 FTIP regional transportation planning documents under project number LAXXXXXXX [NOTE: THE PROJECT IS NOT CURRENTLY INCLUDED IN THE 2015 FTIP. THE FTIP WILL NEED TO BE AMENDED TO INCLUDE THE PROJECT AND THIS TEXT WILL NEED TO BE UPDATED].** These regional transportation plan documents were found to conform to the SIP by FHWA on December 15, 2015.

Per State CEQA Guidelines Section 15130 (d), projects that are included in an approved regional transportation plan (among other land use plans) that adequately address the effected resource area, no additional analysis is required. As the proposed project is listed, as currently proposed, in the region's currently conforming **SCAG 2012–2035 RTP/SCS and SCAG 2015 FTIP [TEXT WILL BE UPDATED]** regional transportation planning documents, it can be concluded that project emissions would not be cumulatively considerable.

4.3.1.7 Climate Change

Similar to the TSM Alternative, Alternative 1 would not exceed the GHG threshold of significance and would be consistent with adopted plans and regulations that aim to reduce GHG emissions. Therefore, Alternative 1 would not result in a cumulatively considerable impact related to GHG emissions and climate change.

4.3.1.8 Noise and Vibration

The resource study area for the cumulative impacts analysis encompasses the area where increases in project construction or operational noise and vibration would be perceptible. For cumulative construction noise impacts, this area would extend approximately 500 feet from the construction area. For construction vibration impacts, the cumulative impacts study area would extend 50 feet. For operational cumulative noise impacts, this area would extend approximately 175 feet from the proposed LRT tracks or BRT lane and for operational vibration impacts the area would extend approximately 50 feet.

Under the Curb-Running BRT Alternative, construction of the proposed project would require heavy equipment and, therefore, could result in significant increases in ambient noise levels. Although recommended construction noise mitigation measures would reduce temporary construction noise impacts due to the proposed project to a less-than significant level, the residual increases in noise levels due to the Curb-Running BRT Alternative, when combined with increased noise generated by other sources or projects in the vicinity of the study area, could result in adverse cumulative noise impacts. The significance of cumulative noise impacts would depend on the locations of other proposed projects and potential sources of noise and the extent to which they would increase noise levels within the study area during construction of the Curb-Running BRT Alternative. Although it is not possible to predict with certainty which future projects would contribute to cumulative noise levels and quantify the increase in noise levels, nonetheless, for the purposes of this EIS/EIR, the short-term and temporary cumulative construction noise impacts due to the Curb-Running BRT Alternative and other noise sources are considered to be potentially significant.

Because vibration impacts are evaluated based on single-event levels, the fact that the cumulative vibration impacts study area is limited to within 50 feet of project construction activities, and because mitigation measures are proposed (see Noise and Vibration Impacts Report) that would reduce vibration generated by Curb-Running BRT Alternative construction activities to a less-than-significant level, the probability is very low that a BRT construction activity and another single-event activity would occur simultaneously and in very close proximity and would result in a significant cumulative impact. Therefore, during construction, the proposed BRT Alternative and other projects are not expected to result in significant cumulative vibration impacts on sensitive uses within the study area.

The predicted operational noise increases from the Curb Running BRT Alternative would result in a less-than-significant impact. Because roadway noise is the primary source of noise along the Van Nuys Boulevard portion of the corridor, increases in roadway traffic volumes over time due to cumulative growth and development could also increase ambient noise levels in the area. However, future increases in roadway traffic are expected to result in a less than 1-decibel increase in community noise levels. Therefore, the estimated long-term cumulative increase in noise levels due to the Curb Running BRT Alternative and future traffic growth would be considered less-than significant.

A possibly significant source of future noise along the San Fernando Road portion of the corridor is the CAHSR Project. If the CAHSR Project is constructed in the Metrolink ROW along San Fernando Road, it would likely result in a significant noise impact and require noise mitigation. It's not known whether CAHSR noise impacts could be mitigated to a less-than-significant level. Therefore, although the potential increase in noise levels along San Fernando Road due to the Curb-Running BRT Alternative would be negligible, noise generated by this alternative combined with other future sources of noise along San Fernando Road, such as the CAHSR Project, could result in significant cumulative noise impacts.

The Curb-Running BRT Alternative would result in no operational vibration impacts, so it would not contribute to any cumulative operational vibration impacts.

4.3.1.9 Geology and Soils

See discussion above for the TSM Alternative.

4.3.1.10 Hazardous Waste and Materials

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 and the area for which database searches were conducted to document potential sites that have recognizable environmental concerns (RECs).

The study area is characterized by urban uses including industrial, commercial, residential, institutional, and infrastructure 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.

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 and implementation of proposed mitigation (see the Hazardous Materials Technical Report) 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.

4.3.1.11 Energy

See the cumulative impacts discussion for the TSM Alternative.

4.3.1.12 Ecosystems and Biological Resources

Implementation of this alternative would have limited adverse effects on the diversity and abundance of native flora and fauna in the region. The biological resources study area supports only marginally suitable foraging, nesting, and roosting habitat for wildlife species. The biological resources study area has no potential to support a high diversity of native plants. Most wildlife species that could be

expected to use the project site are species that are adapted to urban environments and disturbances caused by human-induced activities. Additionally, any biological resources impacts due to Alternative 1 and the other the build alternatives would be mitigated with implementation of proposed mitigation measures (see the Ecosystems/Biological Resources Impacts Report). The related projects shown in Figure 3-1 are also expected to result in no or minimal impacts on biological resources for similar reasons. As a consequence, implementation of the build alternatives would not result in or contribute to significant cumulative impacts on regional flora and fauna.

4.3.1.13 Hydrology and Water Quality

The study area for this cumulative impacts discussion is the San Fernando Valley in Los Angeles County and generally encompasses the area from Ventura Boulevard in the south, in the City of Los Angeles, to the City of San Fernando and the Sylmar/San Fernando Metrolink station in the north.

All of the build alternatives would result in generally similar contributions to cumulative impacts, which are described below.

Water Quality

Development of the project and other development within the study area would potentially degrade stormwater quality by contributing pollutants during construction and operation. Stormwater quality varies according to surrounding land uses, impervious surface area, and topography, as well as with the intensity and frequency of rainfall or irrigation. Runoff can contain grease, oil, and metals accumulated in streets and driveways, as well as sediment and other particulates, animal waste, pesticides, herbicides, fertilizer, and trash.

Cumulative development could affect water quality if the land use change, the intensity of land use changes, and/or drainage is altered such that the introduction of pollutants to surface water or groundwater is facilitated. Land use changes would potentially alter the type and concentration of pollutants in stormwater runoff, and increased intensity of land use would potentially increase pollutant concentrations. The most common sources of stormwater pollutants in urban areas are from construction sites, streets, parking lots, large landscaped areas, and household and industrial materials dumped into storm drains.

When the effects of the project on water quality are considered in combination with the potential effects of other projects in the area, there would be the potential for cumulative impacts to surface, stormwater and groundwater quality. The incremental water quality impact contribution from implementation of the project would be minor, but the combined effects on water quality from the project and other projects in the study area could result in a cumulatively significant impact. However, new projects within the study area are subject to the requirements of the associated Los Angeles MS4 Permit, the Construction General Permit, and city municipal codes as they relate to water quality; these regulatory requirements have been designed to be protective of water quality. Additionally, development projects may be subject to an environmental review process, which would identify potential site- and/or project-specific water quality impacts, and any feasible measures to mitigate potential significant impacts. Adherence to regulatory and permit requirements would minimize the proposed and related project's adverse water quality impacts. Therefore, there would be a less than significant cumulative impact on water quality as a result of project implementation.

Groundwater Recharge and Supplies

The study area is located in the San Fernando Valley groundwater subbasin, which generally flows eastward, parallel to the course of the Los Angeles River. Because the area is heavily developed, cumulative projects would likely be in-fill development. Cumulative development would not be expected to substantially increase the amount of impervious surfaces, so groundwater recharge potential from percolating rainfall would not be adversely affected, and indirect lowering of the local groundwater table is not likely to occur. As a result, groundwater recharge would not be adversely affected. The project's contribution to cumulative groundwater recharge impacts would not be cumulatively considerable, and there would be a less than significant cumulative impact.

Stormwater and Drainage

Cumulative development in the study area could increase the volume and rate of stormwater runoff. Such increases could cause localized flooding if the storm drainage capacity is exceeded or if flows exceed channel capacities and are conveyed to overbank areas where flood storage may not be available. For the most part, the cumulative projects in the study area would occur in developed areas with impervious surfaces, and these projects would not be expected to substantially increase the amount of impervious surfaces. All cumulative projects within the study area would be required to include design features to reduce flows to pre-project conditions. If improvements to storm drainage capacity are needed, the project applicants would be required to coordinate with local city agencies to ensure the appropriate conditions of approval for storm drainage improvements are identified. Therefore, the proposed project would not likely contribute to the cumulative exceedance of the study area's storm drainage capacity, and there would be a less than significant cumulative impact.

Flooding and Flood Hazards

Cumulative development in the study area could increase the exposure of people and structures to flood risks if County flood channels or dams in the project area failed. However, the potential for failure of these channels or dams is considered low. Therefore, the proposed project would not contribute to a cumulative exposure of people and structures to risks of flooding, and there would be a less than significant cumulative impact.

4.3.1.14 Safety and Security

Implementation of Alternative 1 would result in impacts, after mitigation (see the Safety and Security Impact Report), on bicycle safety due to the removal of existing bike lanes and potential impacts on emergency vehicle response time due to the increased congestion resulting from the removal of mixed-flow travel lanes. Consequently, the adverse safety effects of Alternative 1 combined with the effects of other projects in the study area that generate traffic and increase congestion or reduce bicycle access and safety could be cumulatively significant.

4.3.1.15 Parklands and Community Facilities

The study area for the cumulative impacts analysis consists of the service areas of the parklands and community facilities that serve the project site or would be affected by the proposed project. In general, the cumulative impacts study area encompasses the neighborhoods and communities adjacent to the project corridor.

Alternative 1 would result in no impacts related to the physical acquisition, displacement, or relocation of parkland and community facilities. During construction, the build alternatives could result in substantial adverse effects and significant impacts under NEPA and CEQA related to noise, air quality, traffic, and visual impacts from construction activities and equipment; and reduced access and delayed emergency response resulting from temporary sidewalk, lane, and road closures, and temporary removal of parking. Construction effects and impacts would be reduced or minimized through construction management and abatement measures. In addition, these effects and impacts would be short-term and temporary, and with the implementation of mitigation measures (see the relevant technical studies for proposed mitigation measures), these effects and impacts would be reduced to levels that are less than cumulatively considerable under NEPA and CEQA.

During operation, Alternative 1 would result in no or negligible air quality, traffic, or noise impacts on parklands and community facilities. Therefore, these effects would not result in a cumulatively considerable contribution to a significant cumulative impact.

Alternative 1 and the other build alternatives would result in minor adverse effects under NEPA, and impacts that are less than significant under CEQA, related to induced population growth around station areas. The project corridor is in an urbanized area containing a limited number of vacant or underutilized parcels. Therefore, the build alternatives would not be expected to change existing growth and development patterns substantially. In addition, the build alternatives are intended to accommodate future population growth that has already been projected in the region, and any development that could result around station areas is anticipated to be consistent with these current growth projections. Therefore, when combined with other related projects in the project study area, the project's effects and impacts on parklands and community facilities related to induced growth would not be expected to be cumulatively considerable and significant.

The build alternatives may also result in minor adverse effects under NEPA, and impacts that are less than significant under CEQA, related to increased regional access to parklands and community facilities, which has the potential to result in the increased use of these facilities. However, the project corridor is in an urbanized area with substantial recreational facilities in surrounding areas. Because there are facilities in surrounding areas, this alternative is unlikely to draw substantial numbers of visitors from those areas to the project study area. Other related projects in the project study area include housing and mixed-use development, which could result in population growth and consequently the increased use of parklands and facilities. However, developers of housing and mixed-use projects in the study area would be required to pay fees for park improvements, in accordance with the Quimby Act, to ensure that there are adequate parklands to serve the additional residents resulting from development projects. In addition, the jurisdictions in the project study area have plans to increase recreational opportunities and facilities, including through the implementation of the City of Los Angeles "50 New Parks Initiative," and the City of San Fernando Pacoima Wash Greenway project. With the availability of additional recreational opportunities, there would be sufficient recreational opportunities to accommodate any increase in residents and visitors to the facilities. Therefore, when combined with other related projects in the project study area, the project's impacts on parklands and community facilities from increased access would not be expected to be cumulatively considerable.

4.3.1.16 Historic, Archaeological, and Paleontological Resources

Historic Resources

Under Alternative 1, there would be no adverse effects under Section 106 to historic properties; therefore, this alternative would not contribute to any cumulative impacts on the properties identified as part of this study that might occur due to other planned or proposed projects in the study area.

Archaeological Resources

Under Alternative 1, there would be no adverse effects under Section 106 to archaeological resources or human remains; therefore, this alternative would not contribute to any cumulative impacts on archaeological resources that might occur due to other planned or proposed projects in the study area.

Paleontological Resources

Under Alternative 1, there would be no adverse effects to paleontological resources; therefore, this alternative would not contribute to any cumulative impacts on paleontological resources that might occur due to other planned or proposed projects in the study area.

4.3.1.17 Environmental Justice

Alternative 1 would not result in disproportionately high and adverse effects on minority and low-income populations; therefore, this alternative would not contribute to cumulative impacts on environmental justice communities.

4.3.1.18 Growth-Inducing Impacts

The BRT alternatives (Alternatives 1 and 2) would not include the development of new housing or businesses that would directly induce growth. Therefore, neither BRT alternative would directly contribute to cumulative growth inducement effects in the study area. However, the proposed project improvements to the transit system and increases in transportation network efficiency and connectivity could be a catalyst for new development in the project study area. The indirect growth inducement effects of the BRT alternatives could contribute to the growth inducement effects of other infrastructure projects and new residential and business development projects in the cumulative impacts study area. This induced growth could be substantial and result in significant adverse impacts to the environment. However, it should be noted that in general, this cumulative induced growth is accounted for in local (i.e., City of Los Angeles community plans and City of San Fernando General Plan) and regional (i.e., SCAG RCP and RTP/SCS) plans (see Tables 3-2 through 3-4 in the Growth-Inducing Impacts Report). Pursuant to Section 15130 of the State CEQA Guidelines, “no further cumulative impacts analysis is required when a project is consistent with a general, specific, master or comparable programmatic plan where the lead agency determines that the regional or area-wide cumulative impacts of the proposed project have already been adequately addressed, as defined in section 15152(f), in a certified EIR for that plan.”

4.4 Build Alternative 2 – Median-Running BRT Alternative

4.4.1 Cumulative Impacts

4.4.1.1 Land Use

Impacts would be similar to or slightly greater (due to additional traffic impacts) than those described above for Alternative 1.

4.4.1.2 Real Estate and Acquisitions

Similar to Alternative 1, Alternative 2 would not require the permanent acquisition of property and, therefore, would not contribute to cumulative real estate or acquisition impacts.

4.4.1.3 Economic and Fiscal Impacts

Similar to Alternative 1, Alternative 2, the Median-Running BRT Alternative, would not require acquisition of properties and consequently would not result in direct adverse effects that could contribute to cumulative adverse economic and fiscal impacts. The indirect economic and fiscal effects due to the Median-Running BRT Alternative would be minimal and can be further reduced with implementation of proposed mitigation measures (see the Economic and Fiscal Impacts Report); therefore, this alternative would not contribute to any significant adverse cumulative fiscal and economic impacts.

4.4.1.4 Communities and Neighborhoods

The cumulative impacts that could occur due to implementation of Alternative 2 would be similar to those described above for Alternative 1.

4.4.1.5 Visual Qualities and Aesthetics

The cumulative impacts that could occur due to implementation of Alternative 2 would be similar to those described above for Alternative 1.

4.4.1.6 Air Quality

Cumulative impacts would be similar to the cumulative impacts described above for Alternative 1.

4.4.1.7 Climate Change

Similar to the TSM Alternative and Alternative 1, Alternative 2 would not exceed the GHG threshold of significance and would be consistent with adopted plans and regulations that aim to reduce GHG emissions. Therefore, Alternative 2 would not result in a cumulatively considerable impact related to GHG emissions and climate change.

4.4.1.8 Noise and Vibration

Alternative 2's contribution to any cumulative impacts would be similar to those described above for Alternative 1.

4.4.1.9 Geology and Soils

See discussion above for the TSM Alternative.

4.4.1.10 Hazardous Waste and Materials

See the discussion above for Alternative 1 – Curb-Running BRT.

4.4.1.11 Energy

See cumulative impacts discussion for the TSM Alternative.

4.4.1.12 Ecosystems and Biological Resources

Cumulative impacts would be similar to the cumulative impacts described above for Alternative 1.

4.4.1.13 Hydrology and Water Quality

All of the build alternatives would result in generally similar contributions to cumulative impacts. See the discussion of cumulative impacts for Alternative 1 above.

4.4.1.14 Safety and Security

Cumulative effects anticipated to occur under this alternative would be similar to those anticipated to occur under Alternative 1 – Curb-Running BRT.

4.4.1.15 Parklands and Community Facilities

The cumulative impacts that could occur due to implementation of Alternative 2 would be similar to those described above for Alternative 1.

4.4.1.16 Historic, Archaeological, and Paleontological Resources

Historic Resources

Under Alternative 2, there would be no adverse effects under Section 106 to historic properties; therefore, this alternative would not contribute to any cumulative impacts on these properties.

Archaeological Resources

Under Alternative 2, there would be no adverse effects under Section 106 to archaeological resources or human remains; therefore, this alternative would not contribute to any cumulative impacts on archaeological resources that might occur due to other planned or proposed projects in the study area.

Paleontological Resources

Under Alternative 2, there would be no adverse effects to paleontological resources; therefore, this alternative would not contribute to any cumulative impacts on paleontological resources that might occur due to other planned or proposed projects in the study area.

4.4.1.17 Environmental Justice

Alternative 2 would not result in disproportionately high and adverse effects on minority and low-income populations; therefore, this alternative would not contribute to cumulative impacts on environmental justice communities.

4.4.1.18 Growth-Inducing Impacts

The cumulative impacts of Alternative 2 would be similar to the impacts described above for Alternative 1.

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

4.5.1 Cumulative Impacts

4.5.1.1 Land Use

The cumulative impacts would be similar but slightly greater than those described above for Alternatives 1 and 2. As discussed above, the proposed project and potential related projects in the area that would generate traffic could result in significant cumulative traffic impacts at local study intersections, which would conflict with local plans and policies to reduce congestion. Operation of the Low-Floor LRT/Tram facilities could also result in noise impacts on some nearby sensitive land uses. Thus, the proposed and related projects could result in significant cumulative land use impacts with respect to conflicts with local land use plans and incompatibilities with adjacent and surrounding land uses.

4.5.1.2 Real Estate and Acquisitions

The study area for the cumulative impacts discussion would encompass the local communities that surround the proposed project alignment because it is likely that most of the businesses or residents that would be displaced by the project would relocate to properties within this study area. As described above, Alternative 3 would result in acquisitions of commercial and industrial properties within the study area. In addition, MSF Option A would result in the acquisition and displacement of one parcel that appears to include four housing units that could require relocation of four families. Metro would follow the provisions of the Uniform Act and pay fair market value for properties that are acquired and provide relocation assistance to displaced businesses and residents.

Based on the cumulative projects list, which consists primarily of mixed-use and residential housing developments in residentially zoned areas, there does not appear to be any projects that would result in substantial displacement of businesses or residences. Although Alternative 3 would displace a large number of businesses and, under MSF Option A, four residences, it is anticipated that the majority of displaced businesses and residents could be relocated within the study area or in surrounding communities. In addition, it is not anticipated that relocated businesses or residences that would be displaced by the project would require construction of a substantial amount of commercial and industrial development or new housing that would result in substantial adverse indirect impacts. As a consequence, the proposed and related projects are not expected to result in substantial adverse cumulative real estate and acquisitions impacts.

4.5.1.3 Economic and Fiscal Impacts

Alternative 3 in conjunction with other related projects that require the acquisition of parcels and result in the long-term loss of income-generating jobs and tax revenue could potentially result in adverse cumulative economic and fiscal impacts under NEPA. However, the related projects identified within the study area do not include any other major public infrastructure projects that would result in permanent loss of tax revenue or jobs. The vast majority of the related projects are residential, commercial, or industrial development projects that would generate long-term jobs and tax revenue.

Alternative 3 – Low Floor LRT/Tram Alternatives, Options A, B and C could potentially spur more significant increased mixed-use development because of its more permanent, major investment into a fixed rail system that may incentivize the private sector to invest in more significant mixed-use development projects at key station locations. However, similar to the BRT alternatives, because of the more localized nature of a Low-Floor LRT/Tram system, compared with a more regional serving LRT, it is not expected that this alternative would generate significant cumulative growth inducement impacts.

4.5.1.4 Communities and Neighborhoods

The cumulative impacts that could occur due to implementation of Alternative 3 would be similar to those described above for Alternative 1. However, because Alternative 3 would result in potentially significant operational impacts on social and community interactions due to business displacements, and potentially significant operational visual impacts on sensitive viewers, it could contribute to significant cumulative impacts on community cohesion and interaction and aesthetic character, unlike the BRT alternatives.

4.5.1.5 Visual Qualities and Aesthetics

The cumulative impacts that could occur due to implementation of Alternative 3 would be similar to those described above for Alternative 1. However, because Alternative 3 would result in potentially significant operational visual impacts on sensitive viewer groups, it could contribute to significant cumulative visual impacts on these resources, unlike the BRT alternatives, especially if other related projects in the vicinity of those viewer groups further degrade the visual character of the area.

4.5.1.6 Air Quality

Cumulative impacts would be similar to cumulative impacts described for Alternative 1 and emissions would not be cumulatively considerable.

4.5.1.7 Climate Change

Similar to the TSM and the other build alternatives, Alternative 3 would not exceed the GHG threshold of significance and would be consistent with adopted plans and regulations that aim to reduce GHG emissions. Therefore, Alternative 3 would not result in a cumulatively considerable impact related to GHG emissions and climate change.

4.5.1.8 Noise and Vibration

The resource study area for the cumulative impacts analysis encompasses the area where project construction or operational noise and vibration would be perceptible. For cumulative construction noise impacts, this area would extend approximately 500 feet from the construction area. For construction

vibration impacts, the cumulative impacts study area would extend 50 feet. For operational cumulative noise impacts, this area would extend approximately 175 feet from the proposed LRT tracks and for operational vibration impacts the area would extend approximately 150 feet.

Similar to the BRT alternatives, construction of the Low-Floor LRT/Tram Alternative would require heavy equipment and, therefore, could result in significant increases in ambient noise levels. Although recommended construction noise mitigation measures (see the Noise and Vibration Impacts Report) would reduce temporary construction noise impacts due to the proposed project to a less-than significant level, the residual increases in noise levels due to the Low-Floor LRT/Tram Alternative, when combined with increased noise generated by other sources or projects in the vicinity of the study area, could result in adverse cumulative noise impacts. The significance of cumulative noise impacts would depend on the locations of other proposed projects and potential sources of noise and the extent to which they would increase noise levels within the study area during construction of the Low-Floor LRT/Tram Alternative. Although it's not possible to predict with certainty what future projects would contribute to cumulative noise levels and to quantify the increase in noise levels; nonetheless, for the purposes of this EIS/EIR, the short-term and temporary cumulative construction noise impacts due to the Low-Floor LRT/Tram Alternative and other noise sources are considered to be potentially significant.

Because vibration impacts are evaluated based on single-event levels, the fact that the cumulative vibration impacts study area is limited to within 50 feet of project construction activities, and because mitigation measures are proposed that would reduce vibration generated by the Low-Floor LRT/Tram Alternative construction activities to a less-than-significant level, the probability is very low that a project construction activity and another single-event activity would occur simultaneously and in very close proximity and would result in a significant cumulative impact. Therefore, during construction, the proposed Low-Floor LRT/Tram Alternative and other projects are not expected to result in significant cumulative vibration impacts on sensitive uses within the study area.

The predicted operational noise increase from the Low-Floor LRT/Tram Alternative would result in less-than-significant noise impacts with mitigation incorporated. Because roadway noise is the primary source of existing noise in the corridor, increases in roadway traffic volumes over time due to cumulative growth and development could also increase ambient noise levels in the area. However, future increases in roadway traffic are expected to result in a less than 1-decibel increase in community noise levels. The estimated increase in the cumulative noise from the Low-Floor LRT/Tram Alternative and future traffic growth would be less-than-significant.

A possibly significant source of noise along the San Fernando Road portion of the corridor is the CAHSR Project. If the CAHSR Project were constructed in the Metrolink ROW on San Fernando Road, it would likely result in a significant noise impact and require noise mitigation. However, it is not known whether CAHSR noise impacts could be mitigated to a less-than-significant level. Therefore, although the potential increase in noise levels along San Fernando Road due to the Low-Floor LRT/Tram Alternative would be less than significant after mitigation, the minor increase in noise due to the Low-Floor LRT/Tram Alternative, when combined with other future sources of noise along San Fernando Road, such as the CAHSR Project, could result in significant cumulative noise impacts.

The Low-Floor LRT/Tram Alternative would result in less-than significant operational vibration impacts with mitigation incorporated. Because vibration impact is evaluated based on single-event levels and because it is unlikely that a Low-Floor LRT/Tram vehicle and other potential vibration sources, such as the HSR train cars, would simultaneously pass by a vibration-sensitive use within 150 feet, operation of the Low-Floor LRT/Tram Alternative is not expected to result in significant cumulative vibration impacts.

4.5.1.9 Geology and Soils

See discussion above for the TSM Alternative.

4.5.1.10 Hazardous Waste and Materials

See the discussion above for Alternative 1.

4.5.1.11 Energy

See the cumulative impacts discussion for the TSM Alternative.

4.5.1.12 Ecosystems and Biological Resources

Cumulative impacts would be similar to cumulative impacts described for Alternative 1. See discussion above.

4.5.1.13 Hydrology and Water Quality

All of the build alternatives would result in generally similar contributions to cumulative impacts. See the discussion of cumulative impacts for Alternative 1 above.

4.5.1.14 Safety and Security

Similar to the other build alternatives, Alternative 3 would result in impacts, after mitigation (see the Safety and Security Impact Report), on bicycle safety due to the removal of existing bike lanes and potential impacts on emergency vehicle response time due to turn restrictions and the increased congestion resulting from the removal of mixed-flow travel lanes. Consequently, the adverse safety effects of Alternative 3 combined with the effects of other projects in the study area that increase congestion or reduce bicycle access and safety could be cumulatively significant.

4.5.1.15 Parklands and Community Facilities

The cumulative impacts that could occur due to implementation of Alternative 3 would be similar to those described above for Alternative 1. However, because Alternative 3 would result in potentially significant operational visual impacts on sensitive viewers at parklands and community facilities, it could contribute to significant cumulative visual impact on these resources, unlike the BRT alternatives.

4.5.1.16 Historic, Archaeological, and Paleontological Resources

Historic Resources

Alternative 3, with MSF Option A, would potentially cause an adverse effect on one historic property located at 14601-3 Aetna Street. This property includes a DWP maintenance building. For the purposes of this analysis, the area that was studied included the San Fernando Valley Area. The analysis included review of prior or proposed projects within the San Fernando Valley area that might cause effects (demolition, specifically) of a DWP building. Due to the types of resources that are proposed for demolition, it does not appear that similar property types within the region would be demolished such that the proposed demolition of this property would cause a cumulative impact on the remaining collection of similar property types within the region. Therefore, this alternative would not result in cumulative impacts on historical resources.

Archaeological Resources

Under Alternative 3, there would be no adverse effects under Section 106 to archaeological resources or human remains; therefore, this alternative would not contribute to any cumulative impacts on archaeological resources that might occur due to other proposed or planned projects in the study area.

Paleontological Resources

Under Alternative 3, there would be no adverse effects to paleontological resources; therefore, this alternative would not contribute to any cumulative impacts on paleontological resources that might occur due to other proposed or planned projects in the study area.

4.5.1.17 Environmental Justice

Alternative 3 would result in disproportionately high and adverse effects on minority and low-income populations with respect to displacements required for right-of-way acquisitions and/or temporary construction easements. Alternative 3 would require between 65 and 90 acquisitions of commercial and industrial property within the project study area, depending on the MSF option selected. In addition, MSF Option A would result in the acquisition of one parcel that appears to include four housing units within a minority block group, potentially requiring relocation of four families.

It is anticipated that a majority of displaced businesses and residents could be relocated within the project study area or in surrounding communities. It is not anticipated that relocated businesses or residences displaced by the project would require construction of a substantial amount of commercial and industrial development or new housing that would result in substantial adverse indirect impacts. Therefore, the proposed and related projects are not expected to result in substantial adverse cumulative environmental justice impacts.

4.5.1.18 Growth-Inducing Impacts

Similar to the BRT alternatives, the rail alternatives (Alternatives 3 and 4) would not include the development of new housing or businesses that would directly induce growth. Therefore, neither rail alternative would directly contribute to cumulative growth inducement effects in the study area. However, proposed project improvements to the transit system and increases in transportation network efficiency and connectivity could be a catalyst for new development in the project study area. The indirect growth inducement effects of the rail alternatives could contribute to the growth-inducement effects of other infrastructure projects and new residential and business development projects in the cumulative impacts study area. This induced growth could be substantial and result in significant adverse impacts to the environment. However, it should be noted that in general, this cumulative induced growth is accounted for in local (i.e., City of Los Angeles community plans and City of San Fernando General Plan) and regional (i.e., SCAG RCP and RTP/SCS) plans (see Tables 3-2 through 3-4 in the Growth-Inducing Impacts Report). Pursuant to Section 15130 of the State CEQA Guidelines, “no further cumulative impacts analysis is required when a project is consistent with a general, specific, master or comparable programmatic plan where the lead agency determines that the regional or area-wide cumulative impacts of the proposed project have already been adequately addressed, as defined in section 15152(f), in a certified EIR for that plan.”

4.6 Build Alternative 4 – Light Rail Transit Alternative

4.6.1 Cumulative Impacts

4.6.1.1 Land Use

The cumulative impacts would be similar to those described under Alternative 3.

4.6.1.2 Real Estate and Acquisitions

Cumulative impacts anticipated to occur under Alternative 4 would be similar to the cumulative impacts expected to occur under Alternative 3. See discussion above for Alternative 3.

4.6.1.3 Economic and Fiscal Impacts

The cumulative impacts would be similar to those described above for Alternative 3 though Alternative 4 has a greater potential to be growth inducing due to its higher carrying capacity, faster average speed and generally higher per capita transit ridership..

4.6.1.4 Communities and Neighborhoods

The cumulative impacts that could occur due to implementation of Alternative 4 would be similar to those described above for Alternative 3.

4.6.1.5 Visual Qualities and Aesthetics

The cumulative impacts that could occur due to implementation of Alternative 4 would be similar to those described above for Alternative 3.

4.6.1.6 Air Quality

Cumulative impacts would be similar to the cumulative impacts described for Alternative 1, and Alternative 4 emissions would not be cumulatively considerable.

4.6.1.7 Climate Change

Similar to the TSM Alternative and the other build alternatives, Alternative 4 would not exceed the GHG threshold of significance and would be consistent with adopted plans and regulations that aim to reduce GHG emissions. Therefore, Alternative 4 would not result in a cumulatively considerable impact related to GHG emissions and climate change.

4.6.1.8 Noise and Vibration

Alternative 4's contribution to any cumulative impacts would be similar to those described above for Alternative 3.

4.6.1.9 Geology and Soils

As noted in the discussion of the TSM Alternative's cumulative impacts above, in general, geologic hazards are site specific and consequently, it's unlikely that related and proposed projects would contribute to cumulative geological hazards impacts. One exception would be when subsurface excavations result in ground and differential settlement that could affect adjacent properties. If other

nearby projects would also include excavation activities that could result in the potential settlement of soils, then the proposed and nearby projects could result in adverse cumulative settlement impacts on nearby properties. The LRT Alternative, unlike the other alternatives, could result in substantial settlement impacts. The study area for cumulative geological hazards due to the LRT Alternative is limited to those properties adjacent to the tunnel portion of the LRT alignment. Although the project and cumulative impacts could be significant, compliance with proposed design and mitigation measures would reduce potential impacts to a less-than-significant level.

4.6.1.10 Hazardous Waste and Materials

See the discussion above for Alternative 1.

4.6.1.11 Energy

See the cumulative impacts discussion for the TSM Alternative.

4.6.1.12 Ecosystems and Biological Resources

Cumulative impacts would be similar to cumulative impacts described for Alternative 1. See discussion above.

4.6.1.13 Hydrology and Water Quality

All of the build alternatives would result in generally similar contributions to cumulative impacts. See the discussion of cumulative impacts above for Alternative 1

4.6.1.14 Safety and Security

Alternative 4 would result in impacts, after mitigation (see the Safety and Security Impact Report), on bicycle safety and emergency vehicle response times, similar to Alternative 3. Consequently, the adverse safety effects of this alternative, combined with the effects of other projects in the study area that increase congestion or reduce bicycle access and safety, could be cumulatively significant.

4.6.1.15 Parklands and Community Facilities

The cumulative impacts that could occur due to implementation of Alternative 4 would be similar to those described above for Alternative 3.

4.6.1.16 Historic, Archaeological, and Paleontological Resources

Historic Resources

Alternative 4, with MSF Option A, would potentially cause an adverse effect on the historic property at 14601-14603 Aetna Street, and Alternative 4, under all MSF options, would cause an adverse effect on the historic property located at 8324 Van Nuys Boulevard. These properties include a DWP maintenance building and a mid-century bank building planned as part of the Panorama City planned community along Van Nuys Boulevard. For the purposes of this analysis, the area that was studied included the San Fernando Valley Area. The analysis included review of prior or proposed projects within the San Fernando Valley area that might cause effects (demolition, specifically) of either a DWP building or mid-century bank building. Due to the types of resources that are proposed for demolition, it does not appear that similar property types within the region would be demolished such

that the proposed demolition of these two properties would cause a cumulative impact on the remaining collection of similar property types within the region. Therefore, this alternative would not result in cumulative impacts on historical resources.

Archaeological Resources

Under Alternative 4, there would be no adverse effects under Section 106 to archaeological resources or human remains; therefore, this alternative would not contribute to any cumulative impacts on archaeological resources that might occur due to other proposed or planned projects within the study area.

Paleontological Resources

Only the subsurficial excavations of the LRT Alternative have the potential to affect fossils as this is the only build alternative with excavations planned in geologically sensitive units. Although construction of Alternative 4 and other projects in the study area could result in the progressive destruction or loss of paleontological resources, which would be a potentially significant cumulative impact, compliance with proposed design and mitigation measures would reduce the project's contribution to any cumulative impacts to a less-than-significant level.

4.6.1.17 Environmental Justice

The cumulative impacts that could occur due to implementation of Alternative 4 would be similar to those previously described for Alternative 3.

4.6.1.18 Growth-Inducing Impacts

Cumulative impacts anticipated to occur under this alternative would be similar to the cumulative impacts expected to occur under Alternative 3 described above.

Chapter 5 References

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