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Metropolitan Transportation
Authority
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3rd Floor Board Room
Los Angeles, CA

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REVISED
PLANNING AND PROGRAMMING COMMITTEE
NOVEMBER 18, 2020

SUBJECT: EAST SAN FERNANDO VALLEY LIGHT RAIL TRANSIT FINAL ENVIRONMENTAL IMPACT REPORT

ACTION: APPROVE RECOMMENDATIONS

RECOMMENDATION

CONSIDER:

A. Approving the East San Fernando Valley Transit Corridor Project (Project), an at-grade light rail transit (LRT) line with 14 stations;

B. Certifying, in accordance with the California Environmental Quality Act, the Final Environmental Impact Report, which includes an option to construct the Project in phases;

C. Adopting, in accordance with CEQA, the:
   1. Findings of Fact and Statement of Overriding Considerations, and
   2. Mitigation Monitoring and Reporting Plan;

D. Authorizing the Chief Executive Officer to file a Notice of Determination with the Los Angeles County Clerk and the State of California Clearinghouse; and

E. Instructing staff, in coordination with the FTA, to work with the Southern California Regional Rail Authority (SCRRA) and the City of San Fernando to address new issues raised along the 2.5-mile shared railroad ROW.
   - Report back to the Board on any supplemental environmental clearance, design evaluations and associated traffic analysis needed. This will be done prior to proceeding with any construction activities on this section of the alignment.

F. Instructing staff, in coordination with the City of Los Angeles to identify a preferred First/Last Mile parallel bike route to replace the existing bike lanes on Van Nuys Boulevard which would be displaced by the LRT project in the Panorama City and Pacoima communities.
   - Report back to the Board with a plan to provide the interim replacement bike lanes during the construction period and permanent replacement bike lanes by the time of the opening of the East SFV Transit Project.

ISSUE

The Final Environmental Impact Statement/Environmental Impact Report (EIS/EIR) has completed all necessary steps to be considered for Certification by the Board in accordance with the California Environmental Quality Act (CEQA). The Executive Summary is included in Attachment A. Certification also includes approval of the Findings of Fact and Statement of Overriding Conditions (Attachment B) and the Mitigation Monitoring and Reporting Plan (Attachment C). The Project is a Measure M and Measure R project that is contained in the 2009 Long Range Transportation Plan (LRTP) and the Southern California Association of Governments (SCAG), Regional Transportation Plan (RTP).

Approval of the project environmental document also provides for the inclusion of an Interim Operating Segment (IOS) that would extend along Van Nuys Boulevard from the Metro G Line (Orange) to San Fernando Road and a second segment extending along the railroad right-of-way between Van Nuys Boulevard and the Sylmar/San Fernando Metrolink Station. Staff is recommending continued study of the second segment in response to comments received during the Final EIS/EIR Public Review Period.

BACKGROUND

In June 2018, the Metro Board adopted the Project's Locally Preferred Alternative (LPA), a fully at-grade 9.2-mile LRT line with 14 at-grade stations. More specifically, the Board-selected LPA will extend light rail service north, from the Metro G Line (Orange), 6.7 miles in the median of Van Nuys Boulevard to the intersection of Van Nuys Boulevard and San Fernando Road. The alignment would then transition onto the existing railroad right-of-way adjacent to San Fernando Road and continue 2.5 miles to the Sylmar/San Fernando Metrolink Station.

A detailed description of the Project is provided in the attached Executive Summary to the Final EIS/EIR (Attachment A). The Final EIS/EIR is available on the Project website at: www.metro.net/projects/east-sfv <http://www.metro.net/projects/east-sfv>.

DISCUSSION

California Environmental Quality Act (CEQA)

Metro, as the CEQA lead agency and proponent for the Project, has, in coordination with the cities of Los Angeles and San Fernando, completed an environmental impact report (EIR) for the proposed Project. If the Metro Board certifies the EIR and approves the proposed Project, thereby completing the CEQA environmental clearance, the Project will be eligible to commence right-of-way acquisition, utility relocation, and other construction activities.

CEQA requires that Metro balance, as applicable, the economic, social, technological, and other benefits of the Project against its unavoidable impacts when considering project approval. CEQA Guidelines Section 15091(a) states that if the specific economic, legal, social, technological or other

benefits of the Project outweigh the unavoidable adverse effects, those effects may be considered acceptable. The Board must find that notwithstanding the disclosure of these significant and unavoidable impacts, there are specific overriding reasons for approving this Project and that these reasons serve to override and outweigh the Project's significant unavoidable effects. CEQA requires that support be provided, in writing, of the specific reasons for considering a project acceptable when significant impacts cannot be avoided or substantially lessened. These findings are included in the Project's Statement of Overriding Considerations (Attachment B).

Section 21086.6 of the California Public Resources Code requires that public agencies approving a project with an EIR, adopt a Mitigation Monitoring and Reporting Plan (MMRP). The purpose of the MMRP is to ensure that the mitigation measures identified in the Final EIR that mitigate the potentially significant environmental effects of the Project are, in fact, properly carried out. Metro is responsible for assuring full compliance with the provisions of the MMRP (Attachment C).

Prior to the selection of the Project's LPA, Metro released the Draft EIS/EIR for a 60-day public review and comment period, which were during the months of September and October 2017. During that period, Metro hosted five Public Hearings at which the public was given the opportunity to state their Project likes, dislikes, concerns and/or needs. All meetings were attended by a court reporter to ensure oral comments were documented. A Spanish interpreter was on hand as well as other bilingual Project staff. During the Project's 60-day public review and comment period, more than 900 individuals provided more than 1,700 questions, comments, and concerns pertaining to the Project. The majority of the comments received expressed support for LRT, but there were a number of comments expressing Project concerns. The four most common concerns were as follows:

1) Opposition to Maintenance and Storage Facility (MSF) Option A
2) Traffic congestion concerns
3) Right-of-way acquisition concerns
4) Pedestrian and bicycle access

Responses to all comments received during the Project's 60-day Public Review and Comment period were drafted and are contained in Appendix A2 of the Final EIS/EIR.

National Environmental Protection Act (NEPA)

Metro has worked in coordination with the Federal Transit Administration (FTA) which is the lead agency for the NEPA clearance including the Environmental Impact Statement and Record of Decision (ROD). The NEPA clearance is necessary to ensure the environmental document is inclusive of all information required to meet federal environmental guidance and to allow the Project to be eligible for federal funding. Metro may seek financial assistance from FTA for the Project to carry out the Project's engineering and construction. If FTA provides financial assistance for final design and construction of the Project, FTA will require that Metro design and construct the Project as presented in the Final EIS/EIR and in the ROD. Although no new federal funds have been identified for the Project, by working with the FTA to complete the NEPA portion of the environmental document, the Project could be well positioned to compete if any Federal funding opportunities become available.

Metro G Line Connection:

In June 2018, when the Board selected the LPA, the Project's southern terminus was located at Bessemer Street, an east/west roadway just north of the Metro G Line. At the time of the writing of the Draft EIS/EIR, the decision to grade-separate the Metro G Line had not been made. Therefore, at the June 2018 Board meeting, Project staff was directed to work with Metro G Line project staff to develop a safe/seamless connection. In response, staff reviewed a number of alternatives and determined that the location that provided the greatest safety and comfort would be a station directly under the Metro G Line with connections to both east- and west-bound Metro G Line buses via stairs, escalators, and elevators. A concept drawing of the station is provided (Attachment D).

Grade Crossing Safety Study:
In response to a letter received from the SCRRA, Metro completed a Grade Crossing Safety Study along the 2.5-mile northern, shared railroad right-of-way section of the alignment. The Study's conclusion was that although no system is as safe as grade-separating train traffic from the roadway, with lessons learned from previous Metro constructed LRT projects and new safety equipment that would be an integral Project component, that the Project could safely cross intersections at grade.

Public Release of the Final EIS/EIR
The Final EIS/EIR was initially released on October 2, 2020, for a 30-day public review and comment period. Metro extended the public review period to 45 days to conclude on November 17, 2020 to allow more time to engage with non-English-speaking stakeholders. All comments received during the public review period will be summarized and presented to the Metro Board of Directors before Certification is considered.

Community Outreach:
Due to COVID-19 and public health directives from the County of Los Angeles, all Metro projects and programs are conducting virtual outreach in fall 2020. In response, the Project team developed a robust outreach program to maximize awareness of the final planning phase of the Project. Beginning in August 2020, over 400 bus car cards were displayed on Metro buses operating in the San Fernando Valley to reach current transit riders. Weekday bus ridership on Van Nuys Boulevard is well over 8,000 riders per day as of fall 2020, allowing the car cards to be a very effective way to educate future riders of the Project.

To engage local residents and businesses along the corridor, two rounds of 20,000 flyers were delivered door-to-door and Eblasts were sent out to over 3,400 contacts in the stakeholder database. In addition, a Project post was placed on NextDoor that was sent to 280,000 residential accounts. Metro Project staff gave 15 presentations and delivered announcements to nine neighborhood councils, reaching approximately 450 stakeholders. Metro staff also distributed more than 3,000 flyers to elected officials and Community Based Organizations (CBOs). Federal, state, county and city elected officials also helped promote Metro's community meetings via their social media channels.

To make the contents of the Final EIS/EIR available and more user friendly, a web-based platform was developed in English and Spanish that allows visitors to watch a Project video, learn more about the Project and take a brief survey. The platform can be accessed at: <https://www.metro.net/projects/east-sfv/esfv-learning-tool/>.

Two virtual community meetings were hosted by Metro, including one conducted entirely in Spanish. One hundred seven attended the first virtual community meeting, and thirty-three people attended the second meeting. For those without access to a computer, a phone number was provided that enabled participants to listen in to the presentation and ask questions via text-messaging. Interpretation was available in Armenian for the first meeting and in English for the second meeting, and in other languages by request.

During the public review period, agencies and the public were able to submit comments and/or questions directly to Metro via the project website, via email and via the project hotline. During the two community meetings, approximately 85 questions and comments were received. A summary of public questions and comments received through November 17 will be tabulated and presented at the December Board Meeting.

First/Last Mile Plan and Replacement Bike Lanes

During the preparation of the Final EIS/EIR, Metro prepared a First/Last Mile (FLM) Plan. The FLM Plan identifies barriers for the FLM portions of an individual's journey as well as projects for people walking and people on bikes and their rough order of magnitude costs. These projects, if implemented, will strengthen the FLM journey for Metro customers traveling to and from a Project Station. The FLM Plan also provides an adaptable vision for addressing FLM improvements in a systematic way, and results in data and information to justify taking those actions. The recommended FLM Plan is being submitted as a separate report for Board approval.

The Final EIS/EIR has disclosed that the existing bike lanes located on Van Nuys Boulevard in the communities of Panorama City and Pacoima would be displaced by the East San Fernando Valley Project. The First/Last Mile Plan identified several alternative locations that could serve as replacement bike lanes for those displaced on Van Nuys Boulevard. Metro will work with the City of Los Angeles to identify a preferred alternative from the East San Fernando Valley First/Last Mile Plan that would provide comparable service to the displaced bike lanes. Once identified, the ESFV LRT Project would implement the replacement bike lanes by the time of the opening of the East SFV Transit project.

Project Cost

The Measure M Expenditure Plan allocates $1.33 billion (2015$) for the Project, which according to the Measure M guidelines can be inflated to $1.6 billion (2018$). Project cost estimates are being updated during the Project's ongoing preliminary engineering and will be reported to the Board in 2021.

Interim Operating Segment

To ensure the objectives of the Project are met in a timely manner and avoid delays due to the timing of funding, a Project Interim Operating Segment (IOS) has been included in the Project's Final EIS/EIR. The IOS would enable work to begin sooner and it should be noted that Metro is proceeding with IOSs on all Measure M projects to provide the Metro Board with flexibility in determining the most efficient and cost-effective manner to implement projects.

If the Metro Board approves the recommendation to proceed with the IOS, the first phase would extend along the same median Van Nuys Boulevard alignment and have the same LRT design

features and operating and service characteristics as those described for the LPA; however, the IOS would only extend as far north as San Fernando Road and the proposed Van Nuys/San Fernando Station, rather than continuing 2.5 miles within the existing railroad right-of-way to the Sylmar/San Fernando Metrolink station, as would occur under the LPA. Therefore, it would have a smaller project footprint than the LPA and would include 11 stations of the 14 stations proposed under the LPA. As per Metro Board direction, it would remain Metro's intent to build the remaining northern 2.5 miles of the LPA located within the existing railroad right-of-way from the Van Nuys/San Fernando station to the Sylmar/San Fernando Metrolink station.

A schedule for completing the second phase (i.e., the northern 2.5 miles) would be contingent upon securing the necessary funding, which remains to be determined.

SCRRA and City of San Fernando Concerns

Since the release of the Final EIS/EIR, the Southern California Regional Rail Authority (SCRRA or Metrolink) and the City of San Fernando have voiced continuing concerns pertaining to plans in development (Brighton to Roxford) that might add a fourth track between Van Nuys Boulevard and the Sylmar/San Fernando Metrolink Station at some point in the future that has not yet been determined. At the time of the drafting of the Grade Crossing Safety Study, the Brighton to Roxford project did not have a funding source and as such, there was some question as to whether the project would be constructed. Therefore, the Grade Crossing Safety Study reviewed the impacts of a three-track alignment. Due to SCRRA and City of San Fernando concerns, the Grade Crossing Safety Study would need to be updated to determine the impacts of four tracks at intersections adjacent to the grade crossings that are north of Van Nuys Boulevard.

If the Board approves the IOS and instructs staff to move forward with the first phase of the Project, right-of-way acquisition and utility relocation along Van Nuys Boulevard between the Metro G Line and San Fernando Road could be initiated in 2021. This strategy may also be advantageous for the Project's second phase as it would provide time to continue to work with the SCRRA and the City of San Fernando to address identified concerns along the railroad right-of-way.

To better assess safety and traffic impacts that would result from a fourth track being considered by the SCRRA for the San Fernando Rail Right-of-Way, between Van Nuys Boulevard and the Sylmar/San Fernando Metrolink Station, supplemental design, traffic/safety analysis, and environmental assessments are recommended. Staff will coordinate with the SCRRA and the City of San Fernando to determine the types of analysis that are best suited to forecast the impacts and make design recommendations. Once supplemental studies are agreed upon, staff will return to the Board to seek authorization and budget.

Equity Platform

Board certification of the Project is consistent with the goals and objectives outlined in the Metro Equity Platform Framework in that the Project alignment is located in a disadvantaged, underserved community where access to premium transit service is limited. There is a high concentration of minority communities residing in the Project study area including a significant concentration of Hispanic or Latino 71.7% (35% higher than the average for the City of Los Angeles and 24% higher than the County). Approximately 17.5% of the households in the study area are below the poverty

level, which is 0.2% higher than the City and 3.5% higher than the County. The Project will provide residents with a direct connection to the Metro G Line as well as with Metrolink's Ventura and Antelope Valley Lines. The alignment will provide residents with premium transit service to access employment, health, and educational opportunities, which otherwise would be difficult to reach. The FLM Project component will promote equity and sustainability by connecting underserved neighborhoods to the Metro transit network. The community was included in the process of identifying the pedestrian, bicycling, landscaping and other FLM enhancements that are included in the FLM Plan.

DETERMINATION OF SAFETY IMPACT

Recommended actions will not have any impact on the safety of Metro customers and/or employees because this Project is in the planning phase and no capital or operational impacts result from this Board action.

FINANCIAL IMPACT

With Board approval of the Project Definition and certification of the Final EIS/EIR, the CEQA process will be complete. It is anticipated that FTA staff will issue a ROD in January 2021 which will conclude the environmental document and as such, additional budget is not required at this time. Project staff will continue to coordinate with the SCRRA and the City of San Fernando, as well as with the FTA, to determine what new studies are appropriate for the Project's northern 2.5 miles along the San Fernando Rail Right of Way. Once those conversations are complete, staff will return to the Board with a request for funding for additional analysis and if appropriate, supplemental environmental analysis and design.

Approval of the Project Definition and subsequent ROD will allow the Project to continue with ongoing pre-construction activities, including the purchase of right of way, additional design, and utilities relocation in anticipation of a design-build contract award. The Project has capital funding programmed in the Metro financial forecast based on the cost estimate prepared for the Measure M Expenditure Plan of approximately $1.6 billion in year of expenditure dollars. The funding includes a fixed allocation of Measure R and Measure M funds, as well as state grant funds that have been awarded to the Project. The estimated cost to complete the Project could be higher as the level of design increases and as pre-construction activities are completed. In the event the Project capital cost exceeds currently identified funding, Metro may need to evaluate value engineering, scope reductions including an IOS, and potential additional funding sources.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

The Project is consistent with the Metro Vision 2028 Strategic Plan goals by addressing key transportation challenges in the Project area, including growing travel demand, travel times, traffic congestion and limited connections to the regional rail system.

- The Project is aligned with Vision 2028 Goal #1 - Provide High Quality Mobility Options That Will Enable People to Spend Less Time Traveling. It will provide a high quality mobility option that will improve, travel time, mobility, transit access, and connectivity to Metro's regional transit system. The

Project area experiences heavy traffic congestion, slow speeds, and unreliable travel times along its major streets during peak travel periods. These conditions are expected to worsen over time. By 2040, the Project is expected to reduce travel time for transit passengers from 48 minutes to approximately 30 minutes between the Metro G Line (Orange) Station and the Sylmar/San Fernando Metrolink Station. The ESFV Transit Corridor traverses several densely populated environmental justice communities. Many residents of these communities are transit-dependent. The Project is a major transit investment that will enhance mobility, access, and connectivity for ESFV communities and will reduce dependence on the automobile.

- The Project also supports Goal #3 - Enhance Communities through Mobility and Enhanced Access to Opportunity. It will connect communities in the San Fernando Valley to the regional Metro rail network. This Project will expand access to jobs, major activity centers, including educational and medical facilities, and recreational opportunities within the Project area and throughout the Los Angeles region.

ALTERNATIVES CONSIDERED

The Board could defer or not approve the Project Definition, certify the Final EIS/EIR or adopt the Findings and Statement of Overriding Considerations, as well as the MMRP. However, this action is not recommended as it would jeopardize the Project schedule which, according to the Measure M expenditure plan, is to be in revenue operations by or before 2028. The current schedule also has right-of-way acquisitions and utility relocations commencing in 2021 and a design/build contract being awarded in 2022. Delaying the Project would delay these efforts and could add cost.

NEXT STEPS

Upon Board approval, Project staff will file the Notice of Determination for the Project with the Los Angeles County Clerk and State of California Clearinghouse and will work with the FTA to ensure the timely issuance of a ROD. We will continue to coordinate with the SCRRA and the City of San Fernando to address new issues that pertain to the northern 2.5-mile shared railroad right-of-way segment of the alignment. We will return to the Board with any new supplemental recommendations necessary to address SCRRA and City of San Fernando concerns.

ATTACHMENTS

Attachment A - Executive Summary
Attachment B - Findings of Fact and Statement of Overriding Considerations
Attachment C - Mitigation Monitoring and Reporting Plan
Attachment D - Metro G Line/Project Connection

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ATTACHMENT A

Executive Summary

ES.1 Introduction

The East San Fernando Valley Transit Corridor (ESFVTC) Project is a vital public transit infrastructure investment that would provide improved transit service along the busy Van Nuys Boulevard and San Fernando Road corridors serving the eastern San Fernando Valley. The proposed project would extend from the Metro Orange Line in the south to the Sylmar/San Fernando Metrolink Station in the north and provide area residents, businesses, and transit-dependent populations with improved mobility and access to the regional transit system. Figure ES-1 shows the regional Los Angeles County Metropolitan Transportation Authority (Metro) transit lines expected to be operational by the year 2040 and illustrates how the ESFVTC Project would improve access to the regional system.

In addition to mobility benefits, the ESFVTC Project would provide the project area with transportation, economic, land use, and environmental benefits. The analyses presented in this Final Environmental Impact Statement/Final Environmental Impact Report (FEIS/FEIR) document the impacts on the environment that could occur due to the project, as required by National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA) regulations. It also illustrates how improved mobility to and from the project area has the potential to boost economic development and improve social justice by providing better access to employment, educational and health facilities, and activity centers. Improved transit connectivity and service would also increase transit ridership, which in turn could result in environmental benefits due to reduced vehicle trips, reductions in vehicle miles traveled, less roadway congestion, and improved air quality.

The ESFVTC Project is included in the Southern California Association of Governments (SCAG) 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), adopted in April 2016. The RTP/SCS also outlines several projects in and around the project area aimed at maximizing the effectiveness, safety, and reliability of Southern California's transportation system.

ES.2 Purpose and Need

ES.2.1 Project Purpose/Project Objectives

The ESFVTC Project would provide new service and/or infrastructure that would improve passenger mobility and connectivity to regional activity centers, increase transit service efficiency (speeds and passenger throughput), and make transit service more environmentally beneficial through reductions in greenhouse gas emissions.

Figure ES-1: Existing and Proposed Metro Regional Transportation Projects

Source: Metro, 2019.

The purposes and objectives of the proposed project are summarized below. The project objectives reflect Metro's mission to meet public transportation and mobility needs for transit infrastructure while also being a responsible steward of the environment and considerate of affected agencies and community members when planning a fiscally sound project.

- Improve mobility in the eastern San Fernando Valley by introducing an improved north–south transit connection between key transit hubs/routes;
- Provide new service and/or infrastructure that improves passenger mobility and enhances transit accessibility/connectivity for residents within the project study area to local and regional destinations and activity centers;
- Provide more reliable transit service within the eastern San Fernando Valley;
- Increase transit service efficiency (speeds and passenger throughput) in the project study area;
- Provide additional transit options in an area with a large transit-dependent population, including the disabled, high-transit ridership;
- Encourage modal shift to transit in the eastern San Fernando Valley, thereby improving air quality; and
- Make transit service more environmentally beneficial through reductions in greenhouse gas emissions in the project study area.

ES.2.2 Need

The following mobility challenges within the project study area will continue to grow if no action is taken, due, in large part, to continued population growth, which increases the demand for transit service along the Van Nuys Boulevard corridor, a corridor that already has high population density and transit-dependent persons who rely on transit for daily transportation, including commuting:

- **Mobility challenges resulting from increased roadway congestion, affecting project study area bus service** – Based on the Metro travel forecast model, the number of congested roadway segments (a portion of the roadway located between two intersections) in the project study area is expected to increase from 126 to 162, a 29 percent increase in the AM peak hour and from 103 to 159, a 54 percent increase in the PM peak hour. Average speeds on these segments are expected to decrease by up to 12 miles per hour (mph) during the AM and PM peak hours. The increase in congested segments will result in lower vehicle speeds and increased travel delay in the project study area, reducing mobility. Based on travel projections from the Metro model, the number of study intersections currently operating at level of service (LOS) E (unstable flow with intolerable delay) or F (forced flow and congested; queues fail to clear) along the Van Nuys Boulevard corridor will more than double by 2040. Photo ES-1 shows typical existing congested conditions along the corridor.

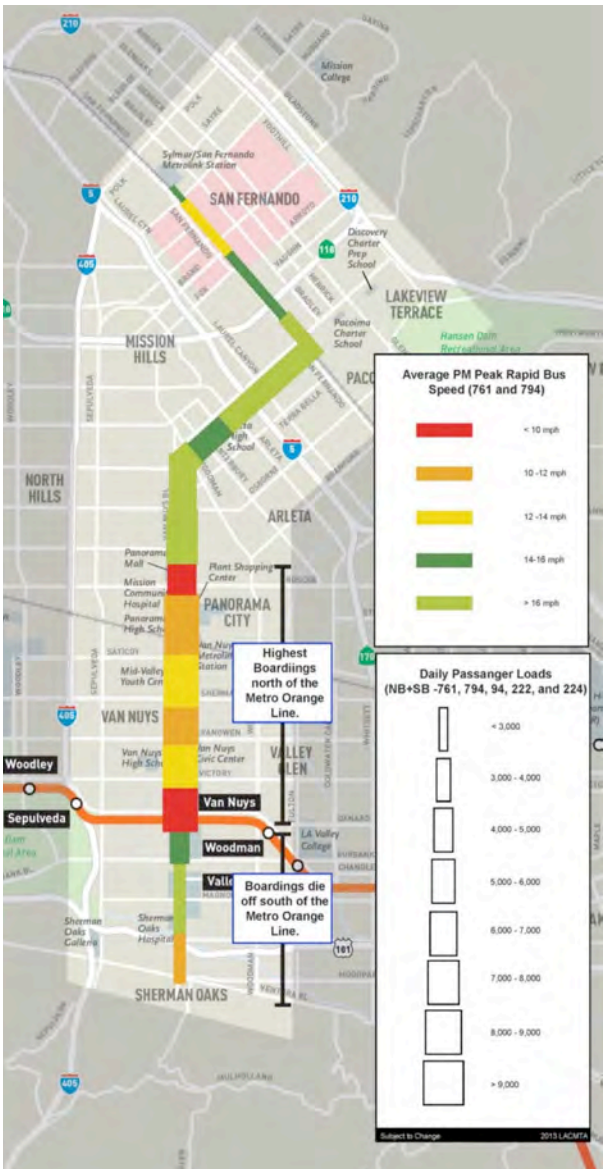
Photo ES-1: Existing Congestion on Van Nuys Boulevard Corridor

Source: Metro, 2016.

- **Increasing travel demand** – According to the Metro model, the person-trip distribution for the project study area indicates that a high number of travel trips tend to be localized to the communities within the area. Approximately 50 percent of the trips stay within the project study area, with a large portion of trips occurring between the northern communities of the City of San Fernando and Pacoima and the southern communities of Mission Hills and Panorama City. These southern communities have a higher number of activity centers that include Kaiser Permanente Hospital, several high schools, and the Panorama Mall. A significant proportion of the overall project study area trip distribution is to and from the Van Nuys Civic Center area, as seen in Figure ES-2, constituting approximately 52 percent of all project study area trips.

  These general trip trends are expected to remain similar in 2040 and show a high attraction of trips between the central project study area and the Civic Center area. Because of the centralized trip patterns, transit accessibility and connectivity are integral to project study area resident travel needs, especially to those who are transit dependent (35 percent). Ten percent of households do not own a car and the average adult poverty ratio is 2.26 persons per acre compared to 1.08 per acre for Los Angeles County. These residents rely on Metro and City of Los Angeles Department of Transportation bus services for work and non-work trips within the study project area and the greater Los Angeles County area. By 2040, the trip pattern is expected to remain similar, with a high number of trips (approximately 50 percent) staying within the project study area. Local trips will remain a significant contributor to traffic and transit trends. Therefore, providing enhanced transit connections and accessibility to surrounding destinations is critical for residents that rely on public transit.

Figure ES-2: Existing Bus Boarding Distribution for Van Nuys Boulevard Corridor



- **Transit service performance and reliability is decreasing due to increased congestion** – The existing bus service along the project study area corridors do not meet the Metro on-time performance goal of 80 percent. This is directly correlated to levels of roadway congestion and related vehicular speeds, which together reduce the mobility of area bus riders. As congestion continues to increase, the reliability of bus service for riders will also worsen, because further congestion will further decrease bus speeds.

- **Large transit-dependent population and expected growth in ridership** – The Van Nuys Boulevard corridor has the seventh highest total transit boardings on the Metro Bus system. This corridor is served by Metro Rapid Line 761 and Local Line 233, which have combined passenger boardings that are the second highest in the San Fernando Valley, with the Metro Orange Line boardings at a slightly higher number. Sepulveda Boulevard and San Fernando Road also have some of the highest total boardings of all transit corridors in the San Fernando Valley. Both transit dependent and discretionary riders constitute the demand in passenger boardings. The overall population density and the transit dependent population density are both more than twice as high in the project study area as in the urbanized area of the County as a whole. The project study area average of 0.53 zero-vehicle households per acre is 77 percent higher than the 0.30 County average. The project study area average transit dependent population of 7.04 persons per acre is more than 100 percent higher than the 3.21 County average. The project study area average of 2.26 adult persons below the poverty line per acre is over two times the 1.08 County average. Although population density and transit dependent population characteristics are expected to stay the same or improve slightly, project study area population is expected to increase by almost 12 percent by the year 2040, and area employment will increase by approximately 15 percent. With the increase in population and employment growth, it is likely that there will be an increase in bus crowding (Photo ES-2).

Photo ES-2: Existing Bus Crowding

Source: Metro, 2016.

- **Exceeding air quality criteria pollutant standards within the project study area** – Standards for many of the criteria pollutants monitored within the east San Fernando Valley have been exceeded multiple times during each of the previous three years of collected data (2011–2013). The traffic analysis indicates that travel speeds, vehicular delay, and congestion will worsen by 2040. This will result in increased gas consumption, and vehicle emissions in the project study area. The increase in delay at the study intersections is expected to increase vehicle emissions and fuel consumption.

ES.3 Identification of the Locally Preferred Alternative

In September and October of 2017, the Draft Environmental Impact Study/Draft Environmental Impact Report (DEIS/DEIR) was circulated for public review and comment for 60 days. The following six alternatives were evaluated in the DEIS/DEIR:

- No-Build Alternative;
- TSM Alternative;

- BRT Alternatives:
  - Alternative 1 – Curb-Running BRT Alternative;
  - Alternative 2 – Median-Running BRT Alternative;
- Rail Alternatives:
  - Alternative 3 – Low-Floor Light Rail Transit (LRT)/Tram Alternative; and
  - Alternative 4 – LRT Alternative.

All build alternatives considered within the DEIS/DEIR (Alternatives 1 through 4) would operate at grade over 9.2 miles, either in a dedicated busway or dedicated guideway (6.7 miles) and/or in mixed-flow traffic lanes (2.5 miles), from the Sylmar/San Fernando Metrolink station on the north to the Van Nuys Metro Orange Line station on the south, with the exception of Alternative 4, which included 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 the City of Los Angeles communities of Panorama City and Van Nuys.

Metro applied the objectives below in evaluating potential alternatives for the ESFVTC Project.

- Provide new service and/or infrastructure that improves passenger mobility and connectivity to regional activity centers;
- Increase transit service efficiency (speeds and passenger throughput) in the project study area; and
- Make transit service more environmentally beneficial by providing alternatives to auto-centric travel modes and other environmental benefits, such as reduced air pollutants, including reductions in greenhouse gas emissions in the project study area.

These goals draw upon those presented in the Alternatives Analysis Report completed in 2012. For the purposes of the DEIS/DEIR, these goals were updated and refined to reflect public involvement and further analysis of the proposed project, the project area, and the background transportation system.

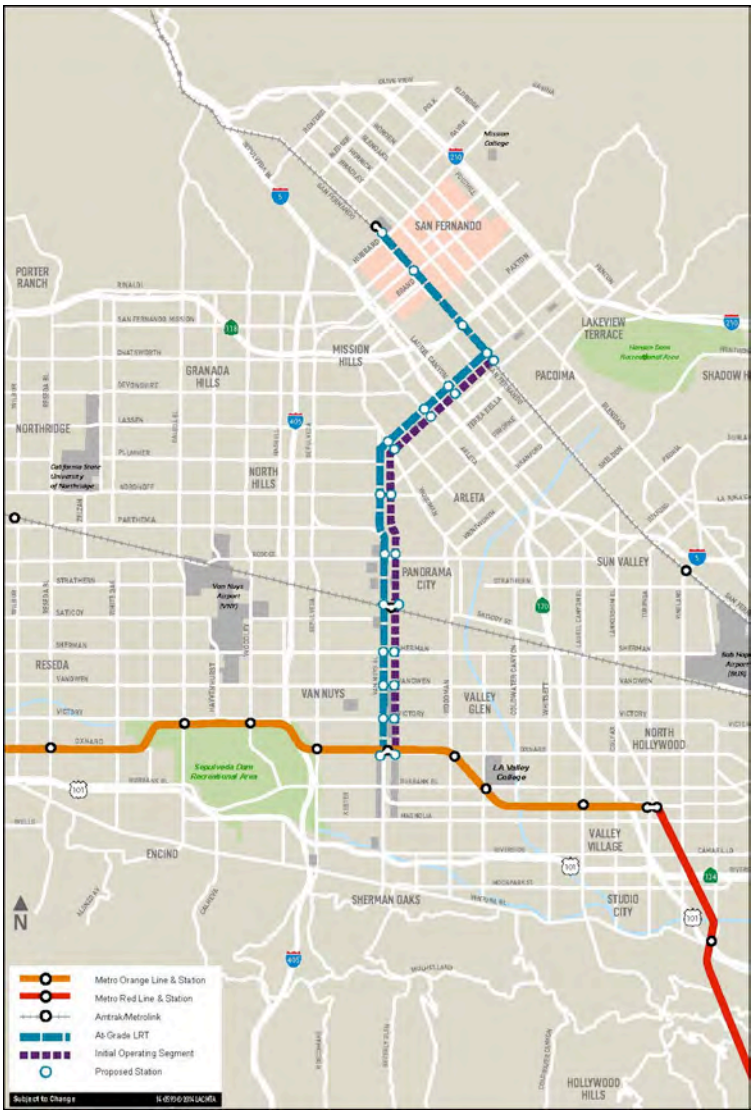
Based on the project objectives and the public comments received during the 60-day comment period for the DEIS/DEIR, a modified version of Alternative 4 (Alternative 4 Modified: At-Grade LRT) was developed on June 28, 2018, and the Metro Board of Directors formally identified Alternative 4 Modified: At-Grade LRT as the Locally Preferred Alternative (LPA). The primary difference between DEIS/DEIR Alternative 4 and the LPA is the elimination of the 2.5-mile subway portion of DEIS/DEIR Alternative 4. Under the LPA, the entire 9.2-mile alignment (Figure ES-3) would be constructed at grade. The subway portion was eliminated because it would be very expensive, have significant construction impacts, and result in little time savings compared with a fully at-grade alignment. In addition, Metro determined that the LPA best fulfilled the project's purpose and need to:

- Improve north–south mobility,
- Provide more reliable operations and connections between key transit hubs/routes,
- Enhance transit accessibility/connectivity to local and regional destinations,
- Provide additional transit options in a largely transit-dependent area, and
- Encourage mode shift to transit.

The LPA also includes the following positive attributes compared to the LRT Alternatives (Alternatives 3 and 4) in the DEIS/DEIR:

- Like Alternative 4, the LPA has fewer stations and would result in superior travel speeds and a greater number of overall boardings compared with the Low-Floor LRT/Tram Alternative (Alternative 3).
- The approximately 2.5-mile subway portion of Alternative 4 would be very expensive, result in additional significant construction impacts, and result in little time savings compared with the LPA.
- By operating trains on a dedicated rail right-of-way adjacent to San Fernando Road, the LPA and Alternative 4 would result in fewer train/automobile conflicts compared with operating trains in mixed-flow traffic (Alternative 3).
- The Low-Floor LRT/Tram Alternative (Alternative 3) would replace local bus service with more frequent rail service; however, this would result in fewer overall boardings and require trains to stop more often, which would result in slower travel speeds, than the LPA and Alternative 4.

Figure ES-3: Project Alignment



Source: KOA, 2019.

Subsequent to identification of the LPA by the Metro Board, additional refinements were made to the project plans to improve pedestrian connectivity and safety, minimize right-of-way impacts and displacements, and improve operational efficiencies. These improvements included refinements to the station locations and footprints, track alignment, intersection configurations, and traction power substation (TPSS) locations. The reader is referred to Appendix GG of this FEIS/FEIR, which contains the revised Advanced Conceptual Plans for the LPA.

ES.3.1 Project Phasing and Identification of an Initial Operating Segment

To ensure the objectives of the project are met in a timely manner and avoid delays due to the timing of funding availability, Metro is considering constructing the LPA in two phases, an Initial Operating Segment (IOS) or phase 1, which would consist of the portion of the LPA alignment along Van Nuys Boulevard, and phase 2, which would include the northern 2.5-mile segment of the LPA along the Metro owned railroad right-of-way. Accordingly, an IOS has been included in this FEIS/FEIR to enable Metro to realize potential cost savings, which would not otherwise occur under the LPA, from phasing the project. It should be noted that Metro is proceeding with IOSs on other projects for that reason and to specifically provide the decision-making body of Metro (the Metro Board) with flexibility in determining the most efficient and cost-effective manner to implement those projects. Proceeding with an IOS for the proposed project will also allow further coordination to occur with the Public Utilities Commission (PUC) and Metrolink, which will be necessary to accommodate double tracking of the Antelope Valley Line, and with the City of San Fernando regarding traffic impacts at intersections in the City prior to development of the remaining northern segment (phase 2) of the LPA.

Similar to the LPA, the IOS and phasing of the project would be responsive to the community's desire, as expressed in the public comments on the DEIS/DEIR, for an at-grade LRT line serving the eastern San Fernando Valley. The IOS would also fulfill the project's purpose and need to:

- Improve north–south mobility,
- Provide more reliable operations and connections between key transit hubs/routes,
- Enhance transit accessibility/connectivity to local and regional destinations,
- Provide additional transit options in a largely transit-dependent area, and
- Encourage mode shift to transit.

ES.3.2 Description of the Locally Preferred Alternative

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 a median dedicated guideway along 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 ES-3. Similar to Alternative 4 described in the DEIS/DEIR, the LPA would include 14 stations. Additional details regarding the LPA characteristics, components, and facilities are discussed below.

ES.3.2.1 Vehicles

LRT vehicles for the LPA and IOS would be similar to those currently used throughout the existing Metro LRT system, as shown in Photo ES-3. Metro's LRT system is designed to accommodate trains with up to three, 90-foot rail cars, for a total train length of 270 feet. Although LRT vehicles can operate at speeds of up to 65 mph in an exclusive at-grade guideway along Van Nuys Boulevard, they would operate no faster than the posted speed limit, which is 35 mph. The LPA

assumes a maximum speed of 65 mph when traveling within the Metro right-of-way adjacent to San Fernando Road. Three-car contests (i.e., trains) can carry approximately 230 seated passengers and up to 400 passengers when standing passengers are included. The LRT train sets would be configured with a driver's cab at either end, similar to other Metro light rail trains, allowing them to run in either direction without the need to turn around at the termini.

Photo ES-3: Examples of Metro LRT Vehicle

Source: Metro Transportation Library and Archives, 2015.

ES.3.2.2 Alignment

The LPA and IOS would have two tracks. Along and just east of San Fernando Road, from the Sylmar/San Fernando Metrolink Station south to Van Nuys Boulevard, the LPA alignment would be located within the existing Metro-owned right-of-way currently used by Metrolink and Union Pacific Railroad. Metrolink and Union Pacific Railroad would continue to use a separate dedicated track.

From the intersection of San Fernando Road and Van Nuys Boulevard to the Metro Orange Line, the LPA and IOS would operate in a semi-exclusive right-of-way in what is currently the median of Van Nuys Boulevard. The LPA and IOS would be separated from automobile traffic along Van Nuys Boulevard by a barrier, except at signalized intersections and controlled at-grade crossings The train would operate no faster than the adjacent prevailing traffic speeds and would be controlled by train signals that would coordinate with the traffic signals.

ES.3.2.3 Stations

Stations would be constructed at approximately 3/4-mile intervals along the entire route to integrate with existing Metro bus services. There would be 14 stations under the LPA, which are listed below, and 11 stations under the IOS (stations 4 through 11 below).

1. Sylmar/San Fernando Metrolink Station;
2. Maclay Station;
3. Paxton Station;
4. Van Nuys/San Fernando Station;
5. Laurel Canyon Station;
6. Arleta Station;
7. Woodman Station;
8. Nordhoff Station;
9. Roscoe Station;
10. Van Nuys Metrolink Station;
11. Sherman Way Station;
12. Vanowen Station;
13. Victory Station; and
14. Van Nuys Metro Orange Line Station.

The proposed stations would have designs consistent with the Metro Rail Design Criteria (MRDC), including directive and standard drawings. Stations, an example of which is shown in Photo ES-4, would be ADA compliant, including compliance with the requirements pertaining to rail platforms, rail station signs, public address systems, clocks, escalators, and track crossings.

Common elements would include signage, maps, fixtures, furnishings, lighting, and communications equipment. All stations are proposed to have center or side platforms, allowing passengers to access trains traveling in either direction. Typically, at-grade station platforms are 270 feet long (to accommodate three-car trains), 39 inches high (to allow level boarding and full accessibility, in compliance with the ADA), and minimum 12.2 feet wide for side platforms to 16 feet wide for center platform stations.

Canopies at the LRT stations would be approximately 13 feet high and would incorporate directional station lighting to enhance safety. The stations would include seating elements and contain ticket vending machines, variable message signs, route maps, and fare gates, as well as the name and location of the LRT station. In addition, Metro is moving to a fare gate system and such a system would be integrated into station design as appropriate (Photo ES-4).

When feasible, stations would also include bicycle parking and bike lockers at or near stations, as required by MRDC. In addition, signage and safety and security equipment, such as closed-circuit televisions, public announcement systems, passenger assistance telephones, and variable message signs (providing real-time information), would be part of the amenities. No parking would be provided at the proposed new stations.

Photo ES-4: Example of Typical At-Grade LRT Station

Source: Metro, 2019. Note: These figures do not represent all components of a Metro system, such as pedestrian gates.

ES.3.2.4 Supporting Facilities

The LPA and IOS would require a number of additional elements to support vehicle operations, including an overhead contact system (OCS), TPSS, communications and signaling buildings, and a maintenance storage facility (MSF).

Maintenance and Storage Facility

The LPA and IOS would include construction of a new MSF, which would provide secure storage of the LRT vehicles when they are not in operation, and regular light maintenance to keep them clean and in good operating condition as well as heavy maintenance.

MSF Option B, has been identified as the locally preferred site by the Metro Board. The MSF site would be approximately 25 acres in size. MSF B would be located on the west side of Van Nuys Boulevard and would be bounded by Keswick Street on the south, Raymer Street on the east and north, and the Pacoima Wash on the west. Access to the facility would be via two turnout tracks on the west side of the alignment. A northbound turnout would be located in the vicinity of Saticoy Street. A southbound turnout would be located in the vicinity of Keswick Street.

Photo ES-5: Typical LRT MSF Facility and Inside the Main Building

Source: Metro, 20150.

The MSF would accommodate both operational and administrative functions. The MSF would accommodate all levels of vehicle service and maintenance (i.e., progressive maintenance, scheduled maintenance, unscheduled repairs, warrantee service, and limited heavy maintenance) in addition to storage space for vehicles. The typical MSF would provide: interior and exterior vehicle cleaning, sanding, and inspection areas; maintenance and repair shops; storage yards for vehicles; and storage areas for materials, tools, and spare vehicle parts. The storage yard would be the point of origin and termination for daily service. Photo ES-5 is a photograph of a typical MSF facility (Metro Green Line LRT MSF is shown).

The MSF would serve as the "home base" for the operators. Space would be provided for staff offices, dispatcher workstations, employee break rooms and/or lunchrooms, operator areas with lockers, showers and restrooms, and employee and visitor parking.

The MSF would include collision/body repair areas, enclosed paint booths, and wheel truing (the profiling of wheels to ensure the proper wheel to rail interface) machines. The MSF would also include maintenance-of-way, signals and communications, and traction power functions that would be housed in separate and smaller buildings.

Overhead Contact System

The overhead contact system (OCS) is a network of overhead wires that distributes electricity to light rail vehicles (see Photo ES-6). An OCS would include steel poles placed within the entire alignment to support the overhead wires above the light rail vehicles. A telescoping pantograph or "arm" on the roof of LRT vehicles would slide along the underside of the contact wire and deliver electric power to the vehicles. The OCS poles would be approximately 30 feet tall and typically located approximately every 90 to 170 feet between or outside of the two tracks.

Photo ES-6: Typical OCS for LRT

Source: KOA, 2019.

Traction Power Substations

TPSSs are electrical substations that would be typically placed at approximately ¾-mile intervals. The LPA LRT vehicles would be powered by approximately 14 TPSS units, which would be spaced relatively evenly along the alignment to provide direct current to the LRT vehicles. TPSSs would be located at points along the alignment where maximum power draw is expected (such as at stations and on inclines). In the event that one TPSS needs to be taken offline, the LRT vehicles would continue to operate. The MSF would also have its own designated TPSS. A representative TPSS is shown in Photo ES-7.

Photo ES-7: Typical TPSS for LRT

Source: Metro, 2019.

Communications and Signaling Buildings

Communications and signaling buildings that contain train control and communications equipment would be located at each station, crossover, and at-grade crossing.

ES.3.2.5 Operations

The proposed LRT is anticipated to operate with a 6-minute peak and 12-minute off-peak headways when it opens and is designed to operate at 5-minute peak and 10-minute off-peak once ridership begins to increase. Adjacent and connecting bus lines would be evaluated and headways would be revised depending upon train schedule and demand.

ES.3.2.6 Parking Loss and Travel Lane Loss

Parking Loss

With implementation of the LPA, all curbside parking would be prohibited along Van Nuys Boulevard.

Travel Lane Loss

The number of travel lanes on Van Nuys Boulevard would be reduced from three to two in each direction for the segment between the Metro Orange Line and Parthenia Street under the LPA and IOS. North of that point, the LPA and IOS would maintain the two existing travel lanes in each direction to Laurel Canyon Boulevard and the existing one northbound lane and two southbound lanes along Van Nuys Boulevard from Laurel Canyon Boulevard to San Fernando Road.

ES.3.2.7 Turning Restrictions

Left turns from Van Nuys Boulevard onto cross streets would be maintained at most of the currently signalized intersections where the LRT would be running in the median. All crossings of the alignment would be controlled by a traffic signal. Motorists who desire to make a left turn where it is no longer allowed would have to make a U-turn at a signalized left-turn location or choose a route that would allow them to use a signalized cross street.

Under the LPA and IOS, the intersections with turning restrictions is refined as follows:

- Pinney Street and San Fernando Road (closed via a cul de sac);
- Van Nuys Boulevard and El Dorado Avenue (southbound left only);
- Van Nuys Boulevard and Tamarack Avenue;
- Van Nuys Boulevard and Telfair Avenue;
- Van Nuys Boulevard and Cayuga Avenue;
- Van Nuys Boulevard and Oneida Avenue;
- Van Nuys Boulevard and Haddon Avenue;
- Van Nuys Boulevard and Omelveny Avenue;
- Van Nuys Boulevard and Amboy Avenue;
- Van Nuys Boulevard and Rincon Avenue;
- Van Nuys Boulevard and Remick Avenue;
- Van Nuys Boulevard and Vena Avenue;
- Van Nuys Boulevard and Bartee Avenue (northbound left only);
- Van Nuys Boulevard and Lev Avenue;
- Van Nuys Boulevard and Arleta Avenue (southbound left only);
- Van Nuys Boulevard and Beachy Avenue (southbound left only and pedestrian crossings);
- Van Nuys Boulevard and Canterbury Avenue;
- Van Nuys Boulevard and Woodman Avenue (southbound left only);
- Van Nuys Boulevard and Vesper Avenue (northbound left only);
- Van Nuys Boulevard and Novice Street;
- Van Nuys Boulevard and Gledhill Street;
- Van Nuys Boulevard and Vincennes Street;
- Van Nuys Boulevard and Osborne Street;
- Van Nuys Boulevard and Rayen Street;
- Van Nuys Boulevard and Parthenia Street (southbound left only);
- Van Nuys Boulevard and Lorne Street;
- Van Nuys Boulevard and Blythe Street;
- Van Nuys Boulevard and Michaels Street;
- Van Nuys Boulevard and Keswick Street (southbound left only);
- Van Nuys Boulevard and Covello Street;
- Van Nuys Boulevard and Wyandotte Street;
- Van Nuys Boulevard and Gault Street (pedestrian crossing only); Van Nuys Boulevard and Hart Street;

- Van Nuys Boulevard and Hartland Street (pedestrian crossing only);
- Van Nuys Boulevard and Archwood Street;
- Van Nuys Boulevard and Haynes Street;
- Van Nuys Boulevard and Hamlin Street;
- Van Nuys Boulevard and Gilmore Street;
- Van Nuys Boulevard and Friar Street;
- Van Nuys Boulevard and Erwin Street;
- Van Nuys Boulevard and Delano Street;
- Van Nuys Boulevard and Calvert Street;
- Van Nuys Boulevard and Bessemer Street.

ES.3.2.8 Bicycle Facilities

When feasible, bicycle parking would be provided at or near Metro stations, as required by MRDC.

Bicycle parking would be provided at or near Metro stations, as feasible. The existing bike lanes, which extend approximately two miles north along Nuys Boulevard from Parthenia Street to Beachy Avenue and from Laurel Canyon Boulevard to San Fernando Road, would be removed under the LPA and IOS due to right-of-way constraints.

The City of Los Angeles constructed a bicycle path within Metro's railroad right-of-way parallel to San Fernando Road. At the point where the LPA crosses the bicycle path, near the intersection of Pinney Street and San Fernando Road, a signalized grade crossing would be provided. This existing bike path would remain in place except in the City of San Fernando where the bike path would be relocated east in order to accommodate the relocated single Metrolink/UPRR track. The Metro right-of-way is generally wide enough to allow the bicycle path to remain alongside a pair of LRT tracks and a relocated track for Metrolink and the Union Pacific Railroad, though some partial takes of adjacent properties would be required in the City of San Fernando.

ES.3.2.9 Accessibility

Pedestrian Access

There would be a pedestrian overcrossing or undercrossing at the Sylmar/San Fernando Metrolink Station from the LRT platform to the Metrolink platform. For other pedestrian crossings along Metro right-of-way, the crossings would be controlled by pedestrian gates.

All current signal-controlled crosswalks along Van Nuys Boulevard would be maintained under the LPA and IOS. Between the signalized intersections, a barrier would be installed to prevent uncontrolled pedestrian crossings, as is Metro's current practice on its median-running LRT lines. Pedestrians would be required to walk to a signalized location to cross Van Nuys Boulevard. LRT passengers would reach the median station platforms from crosswalks at signalized intersections.

Vehicular Access

Vehicular access along Van Nuys Boulevard that would cross the LRT alignment would be limited to signalized crossings. All other streets or driveways would become right turns into and out of Van Nuys Boulevard.

ES.3.2.10 Right-of-Way

Right-of-way would be required to construct the MSF site from the LPA and IOS alignment. MSF Option B has been identified by Metro as the locally preferred site. Acquisitions would be needed on the west side of Van Nuys Boulevard so that the LRT vehicles can travel to the west of the Van Nuys Boulevard alignment, to the MSF site located within the industrial areas north of Keswick Street and south of Raymer Street.

Metro is the owner of a mostly 100-foot-wide railroad right-of-way through the Pacoima community, the City of San Fernando, and the Sylmar community that currently has a single track down the center of the corridor, with some sidings, and a bike path. The track is operated by the Southern California Regional Rail Authority for Metrolink commuter rail service and is also utilized by the Union Pacific Railroad. Within the Pacoima community of the City of Los Angeles, the 100-foot width could accommodate two LRT tracks, one commuter and freight rail track, and the existing bike path. To provide sufficient room for the LRT tracks under the LPA, the existing single rail track would be removed from the center of the corridor and replaced with a single track along the corridor's northeastern edge to serve commuter and freight rail operations. The right-of-way could accommodate center platform LRT stations near Paxton Street and Maclay Avenue.

At the Pacoima Wash, north of SR-118, a pair of new bridges would be needed, one for the LRT tracks, and the other for the commuter/freight rail track. These bridges would lie alongside the existing San Fernando Road Bridge and the existing bike path bridge. The available right-of-way within the City of San Fernando is relatively narrow. From Jesse/Wolfskill Street to a point approximately 1,000 feet north of Maclay Avenue, the right-of-way widths generally range from 60 feet to 80 feet. As a consequence, property acquisitions would most likely be required to construct the PLPA within this stretch of the project alignment because of the relatively constrained existing right-of-way. Acquisition of properties would also be required for the placement of TPSS units at approximately ¾ -mile intervals along the alignment, as well as at the San Fernando Road and Van Nuys Boulevard intersection.

ES.3.2.11 Gated LRT Grade Crossings

For the portion of the LPA alignment within the Metro-owned railroad right-of-way, the grade crossings at Paxton Street, Wolfskill Street, Brand Boulevard, Maclay Avenue, and Hubbard Avenue would be controlled by traditional vehicular crossing gates. The current single-track crossings would become three.

There would be pedestrian gates for at-grade street crossings, in addition to the traditional vehicular crossing gates that exist at Paxton Street, Wolfskill Street, Brand Boulevard, Maclay Avenue, and Hubbard Avenue.

There would also be left-turn lane gates, where feasible, at signalized intersections along Van Nuys Boulevard, under the LPA and IOS, where left turns are permitted across the LRT dedicated guideway. The gates would be activated whenever a train approaches the intersection to enhance safety at these locations.

ES.3.2.12 Description of the Initial Operating Segment

The IOS would run along the same alignment and have the same LRT design features, MSF, and operating and service characteristics as those described for the LPA below; however, the IOS would extend as far north as San Fernando Road and the proposed Van Nuys/San Fernando station, rather than continuing 2.5 miles within the existing railroad right-of-way to the Sylmar/San Fernando Metrolink station, as would occur under the LPA. Therefore, it would have a smaller project footprint than the LPA and would include 11 stations and 11 TPSS units instead of the 14 stations and 14 TPSS units proposed under the LPA. It remains Metro's intent, however, to build the remaining northern 2.5 miles of the LPA within the existing railroad right-of-way from the Van Nuys/San Fernando station to the Sylmar/San Fernando Metrolink station. The 6.7-mile route of the IOS is illustrated in Figure ES-3-2. Impacts associated with both the LPA and the IOS are discussed for each environmental impact section in Chapters 3 and 4 of this FEIS/FEIR.

Construction of the LPA and IOS is expected to begin in 2022 and would take approximately 4.5 to 5 years to completed.[1] A schedule for completing the second phase (i.e., the northern 2.5 miles) would be contingent upon securing the necessary funding and further coordination with the PUC, Metrolink, and the City of San Fernando prior to development of the remaining northern segment of the LPA. However, it is Metro's expectation that funding will be secured and construction of phase 2 would likely begin within 3 to 5 years of completion of the IOS and would occur over a 3- to 4-year period.

ES.4 Areas of Controversy and Issues to Be Resolved

ES.4.1 Areas of Controversy

Comments submitted during the circulation of the DEIS/DEIR expressed concerns regarding the issues listed below. Please note that these comments are meant to provide a synopsis of the trending themes. Comments received during the public circulation period are provided in Appendix A1 of the FEIS/FEIR. Responses to those comments are provided in Appendix A2 to this FEIS/FEIR.

- A strong preference by the public for LRT, despite the high cost, which is viewed as the best mode of transit, with higher carrying capacity and better mobility benefits;
- A feeling among some community members that the San Fernando Valley is not receiving its fair share of investment in rail, compared to other parts of the county;

[1] Based on the current impacts of the recent social response to the COVID-19 virus and the resulting decline in travel demand, at this time it is impossible to predict future changes to the project purpose and need, schedule, and traffic operation impacts that may result from a COVID-19 response of an unpredictable nature and length. Should significant changes in the planning assumptions, project schedule, project scope, or surrounding project environment result because of a prolonged COVID-19 response, Metro will consider additional project evaluation and public input consistent with NEPA and CEQA.

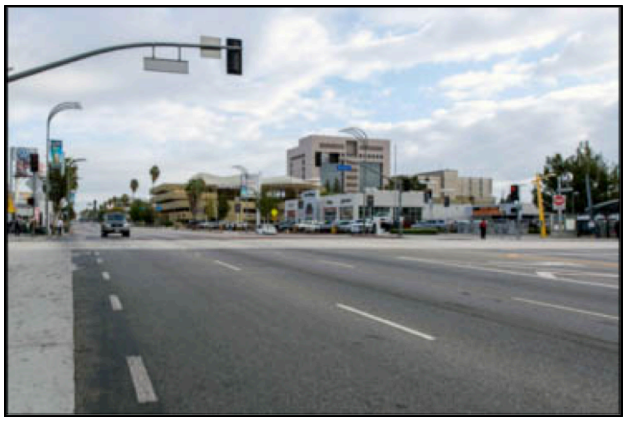
- Concerns expressed about the effects on local businesses of removing on-street parking along Van Nuys Boulevard;
- Concerns about economic impacts on adjacent businesses during project construction;
- Concerns over the loss of traffic lanes to accommodate the project and the resulting increased congestion in the motor vehicle lanes;
- Concerns about the location of the maintenance facility and potential impacts on the surrounding community;
- Concerns that BRT would be slower, carry fewer people, and have limited benefits compared with LRT;
- Concerns that LRT is too expensive, and BRT can provide almost the same level of benefits at a much lower cost;
- Concerns about any potential elimination of existing Metro Local and Metro Rapid bus routes and stops;
- Support for inclusion of bicycle lanes as part of this project, and opposition to their removal; and
- Concerns about fare increases to pay for this project.

ES.4.2 Issues to Be Resolved

Connection with Metro Orange Line

The Metro Orange Line intersects the southern terminus of the alignment (shown in Photo ES-8). Currently, the Metro Orange Line is a BRT that operates in a dedicated right-of-way with an average of 30,000 boardings per day. The Metro Orange Line Van Nuys Station is also a major transfer point. In planning this project, special consideration was given to how this project intersects with the Metro Orange Line and how to best facilitate transfer to/from both services.

Photo ES-8: Existing Metro Orange Line Connection with Van Nuys Boulevard

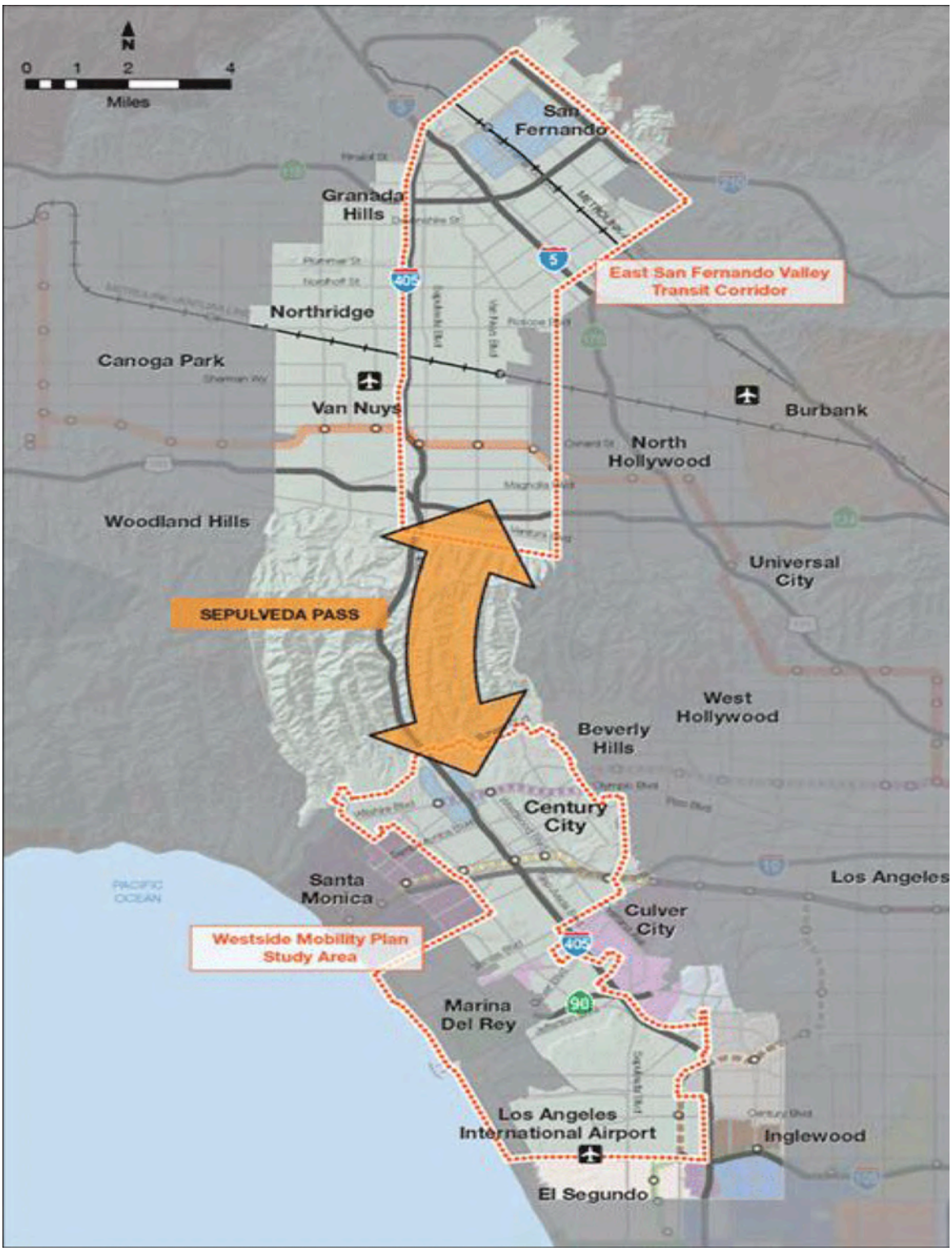


Source: KOA, 2015.

Uncertainties and Opportunities with Sepulveda Pass Transit Project

Along with planning for this proposed project, Metro is also studying how best to provide improved transit service through the Sepulveda Pass connecting the San Fernando Valley and the Westside (e.g. Westwood, Brentwood, West LA, Culver City). The LPA would recognize the Sepulveda Transit Corridor Project and consider any potentially feasible and advantageous points for connecting the two corridors (Figure ES-4).

Figure ES-4: Sepulveda Transit Connection



Source: Metro, 2016

Specific Effects on Landmark Palm Trees in the Civic Center

One of the most noticeable visual elements along the Van Nuys Boulevard corridor is the dual row of palm trees in the Van Nuys Civic Center portion of the corridor (Photo ES-9). The impact assessment for the LPA indicated that the guideway requirements would require the removal of some portion of these trees. It is Metro's intent to hold focused community urban design and station area meetings during final design of the project to obtain input on the re-planting of the trees. The community will be informed during the meetings about drought-tolerant California native plants and trees that could be considered for sun protection/shade as part of the landscaping plan that would be developed during final design.

Photo ES-9: Landmark Palm Trees along Van Nuys Boulevard in the Van Nuys Civic Center

Source: Metro, 2016.

Pedestrian Safety Improvements at Nearby Schools

A number of private and public schools are either adjacent to or near Van Nuys Boulevard and the San Fernando Road corridors (Photos ES-10 through ES-12). The proposed pedestrian measures are being implemented to ensure pedestrian safety is met along the corridor. The Metro Board will need to consider whether additional pedestrian safety measures are warranted, beyond Metro's current pedestrian safety program, as well as those proposed by the project.

Specific Effects of Project on Left Turns into Businesses

The LPA would eliminate some mid-block or outside-of-intersection left turns into properties on Van Nuys Boulevard. There are businesses throughout the corridor where delivery trucks access the business via a left turn (Photo ES-13). A formal outreach effort will be established to work with the businesses on a new access plan that would continue to provide access while being compatible with the operation of the LPA.

Photo ES-10: San Fernando Middle School

Source: Google Maps, 2016.

Photo ES-11: Arleta High School

Source: Google Maps, 2016.

Photo ES-12: Panorama High School

Source: Google Maps, 2016.

Photo ES-13: Truck Making a Left Turn along Van Nuys Corridor

Source: Metro, 2016.

Project Funding

Capital Funding Sources

Metro's approved 2009 Long-Range Transportation Plan (LRTP) reserved $170.1 million for the project, which is the present worth in 2014 dollars, escalated to 2018 dollars. The following combination of federal, state, and local revenue sources are eligible sources of funding for the ESFVTC Project

- Federal Sources:
  - Congestion Management and Air Quality (CMAQ);
  - Regional Surface Transportation Program (RSTP); and
  - Other future FTA funding;
- State Sources:
  - Regional Improvement Program (RIP);
  - Traffic Congestion Relief Program (TCRP);
  - Cap and Trade Program;
- Local Sources:
  - Measure R Sales Tax;
  - Local Agency Funds;
  - Proposition A Sales Tax;
  - Proposition C Sales Tax; and
  - Measure M Sales Tax.

Measure M Sales Tax

In 2016 Los Angeles voters passed the Measure M Sales Tax. This measure included projects that were identified by Metro staff as necessary to improve and enhance system connectivity; promote bicycling and walking; support Americans with Disabilities Act (ADA)/paratransit services for the disabled; provide discounts for students and seniors; invest in bus and rail operations; implement ongoing system maintenance and repair, including repair of bridges and tunnels; and fund repairs and enhancements for local streets and roads. To fund these projects and programs, the Metro Board of Directors agreed, at its June 2016 meeting, to place a measure on the ballot in November 2016 that would augment Measure R with a new half-cent sales tax.

In March 2016, the Metro Board of Directors released the draft Potential Ballot Measure Expenditure Plan for public review. The draft plan anticipates expenditures of more than $120 billion (YOE) over a period of 40 or more years. It relies on the following funding assumptions: a half-cent sales tax augmentation to begin in fiscal year 2018 and an extension of an existing half-cent sales tax rate beyond the current expiration of Measure R in 2039, with a combined one-cent sales tax and a partial extension for ongoing repairs, operations, and debt service. The draft plan currently identifies the ESFVTC Project for a total of $1.33 billion in funding, including $810 million from potential ballot measure revenues and $520 million from other LRTP revenues. The project, as defined in the draft plan, would be a high-capacity transit project, with mode to be determined, that would connect the Metro Orange Line Van Nuys station to the Sylmar/San Fernando Metrolink station and would consist of 14 stations over 9.2 miles.

Project Cost

Capital cost estimates for the alternatives are based on conceptual engineering drawings. The capital costs for the LPA and IOS are presented in 2014 base-year dollars and 2018 dollars for comparative purposes. Capital costs of the LPA range from $1.3 to $1.5 billion in 2014 dollars and $1.9 to $2.2 billion in 2018 dollars. Capital costs for the IOS range from $1.2 to $1.3 billion in 2014 dollars and $1.7 to $1.9 billion in 2018 dollars. Capital costs for the LPA and IOS include construction of the MSF, which is described in the DEIS/DEIR and this FEIS/FEIR as MSF Option B.

Project costs are fully detailed in Chapter 6 of this FEIS/FEIR; a summary is provided below in Table ES-1 for both the LPA and IOS. The capital costs for the LPA and IOS were developed with use of FTA's Standard Cost Categories (SCC)s. These costs represent gross capital expenditures relative to the No-Build Alternative. Total capital costs are divided into five major categories:

- General Construction: Guideway elements, stations, maintenance yards, site work, systems, and contingencies;
- Vehicles: Vehicle manufacturing and assembly;
- Right-of-Way: All rights-of-way, land, maintenance yards, and existing improvements;
- Soft Costs: Professional engineering and related services. Generally, soft costs are capital expenditures that are required to complete an operational transit project; the funds are not spent directly on activities related to brick-and-mortar construction, vehicle and equipment procurement, or land acquisition. Instead, these expenses are for the professional services that are necessary to complete the project; and,
- Unallocated Contingency: Additional costs included in the estimate that may be used to cover unforeseen costs, inflation, and/or mitigation measures.

Table ES-1: Project Costs (2014 YOE Dollars)

Cost Category	LPA with MSF	IOS with MSF
Construction	$683,285,763 – $788,386,872	$618,553,937 – $713,669,016
Right-of-Way, Land, Maintenance Yards, and Existing Improvements	$130,928,800 – $151,013,228	$130,928,800 – $151,139,573
Vehicles	$264,480,000 – $305,235,251	$214,320,000 – $247,244,627
Professional Services	$245,982,875 – $283,837,616	$222,679,417 – $256,964,654
Total Ranges	$1.3 to $1.5 billion	$1.2 to $1.3 billion

Source: Metro, KOA; 2019.

The LPA is projected to cost between $64.7 million annually to operate and maintain. The IOS would cost approximately $50.2 million annually to operate and maintain. The cost may have future variations related to the operational headway.

ES.5 Next Steps

The next steps in the project approval process are:

- Federal Transit Administration (FTA) approves publication and circulation of the FEIS/FEIR for 30 days.
- The Metro Board of Directors considers certification of the FEIS/FEIR in accordance with CEQA regulations, approval of the project, and adoption of the CEQA-required Mitigation Monitoring and Reporting Program and Findings of Fact and Statement of Overriding Consideration.
- A Notice of Determination (NOD) is filed in compliance with CEQA regulations, upon approval of the project by Metro, which will commence a 30-day statute of limitations period for legal challenges under CEQA.
- FTA issues and publishes a Record of Decision (ROD) in the Federal Register.
- FTA publishes a Limitation on Claims (LOC) notice in the Federal Register.
- Following filing of the NOD and publication of the Federal ROD, the proposed project can proceed to final design, construction, and operation. The schedule of these milestones will be refined as the project nears the end of the state and Federal mandated environmental review process.

ES.6 Summary of Environmental Impacts

In compliance with NEPA regulations and the State CEQA Guidelines, this FEIS/FEIR studied potential environmental consequences associated with construction and operation of the LPA and the IOS.

Due to the highly urbanized nature of the project area, potential environmental impacts pertain primarily to the built environment. Over 20 categories of environmental impacts were evaluated. Environmental impact categories where the LPA and IOS would have a significant impact after mitigation under CEQA and adverse effect under NEPA are discussed below.

ES.6.1 Unavoidable Significant Adverse Impacts and Effects under CEQA and NEPA

The LPA and IOS would result in unavoidable significant adverse impacts under CEQA after implementation of proposed mitigation measures in the following environmental resources:

- **Traffic, Parking, and Bicycle Facilities:** The LPA and IOS would result in reductions in roadway capacity due to the conversion of existing motor vehicle lanes to accommodate the LRT. As a consequence, under the LPA, significant traffic impacts under CEQA could occur at 20 of 73 study intersections along the corridor under future (2040) with-project conditions. Under the IOS, significant impacts would occur at 16 of the study intersections. Metro will work with the Cities of Los Angeles and San Fernando to synchronize and coordinate signal timing and optimize changes in roadway striping to minimize potential operational impacts to the extent feasible. However, other mitigation measures, such as lane configuration changes, which would increase the capacity of the roadways or restrict turning movements, were considered infeasible because of right-of-way constraints or secondary effects on upstream and downstream locations. As a consequence, traffic impacts would remain significant under CEQA after implementation of proposed mitigation measures. Construction traffic impacts would also remain significant and unavoidable under CEQA after implementation of proposed mitigation measures. In addition, existing bicycle lanes on Van Nuys Boulevard would be removed, and future bicycle lanes designated for implementation along Van Nuys Boulevard would not be feasible under the LPA and IOS, which would conflict with the City of Los Angeles Bicycle Plan. Therefore, impacts on bicyclists and bicycle facilities would remain significant under CEQA.
- **Land Use:** The LPA and IOS would result in land use incompatibility impacts or conflicts with environmental goals and policies in local land use plans due to traffic, noise, or other impacts that would remain significant under CEQA after implementation of proposed mitigation measures.
- **Community and Neighborhood:** Under the LPA and IOS, the potential operational effects on bicycle access and safety, construction and operational impacts on social and community interactions from business displacements, and operational visual impacts on sensitive viewers would be significant under CEQA after implementation of proposed mitigation measures.
- **Visual and Aesthetics:** The LPA and IOS would result in significant impacts under CEQA on the visual environment within the project corridor. The visual changes in communities along the project corridor due to the introduction of new vertical structures (overhead contact system columns and wires), affecting scenic views of the surrounding mountains and foothills, would remain significant under CEQA after mitigation.
- **Air Quality:** Construction of the LPA and IOS would result in localized PM10 and PM2.5 emissions during construction that would exceed local thresholds. Even with implementation of mitigation measures, emissions thresholds would be exceeded, and impacts would remain significant under CEQA.
- **Noise and Vibration:** Construction of the LPA and IOS would require the use of heavy earth-moving equipment, pneumatic tools, generators, concrete pumps, and similar equipment. Actual construction noise levels would depend on means and methods decided upon by the contractor. The significance thresholds for construction noise levels are those that exceed existing ambient noise levels by 10 dBA or more at a sensitive land use. The construction of the LPA and IOS would have a predicted noise level of 87 dBA (8-hour L_{eq}) at 50 feet, which is about 15 to 20 decibels higher than the current ambient noise level. Therefore, noise from construction of the LPA and IOS would result in a significant impact under CEQA. Although mitigation

measures are proposed to reduce construction noise levels and impacts would be temporary, construction noise levels could still exceed established thresholds resulting in unavoidable significant impacts under CEQA.

- **Safety and Security:** The LPA and IOS would result in significant effects under CEQA after mitigation on pedestrian sidewalk safety due to the narrowing of sidewalks and bicycle safety due to the removal of existing bike lanes as well as potential impacts on emergency vehicle response time due to turn restrictions and the increased congestion resulting from the removal of mixed-flow travel lanes.
- **Parklands and Community Facilities:** The LPA's and IOS's potential construction air quality effects on parklands and community facilities would remain significant under CEQA after implementation of proposed mitigation measures. The operational effects of the LPA and IOS on emergency vehicle access and visual impacts on sensitive viewers would be significant under CEQA after implementation of proposed mitigation measures.

The LPA and IOS would result in unavoidable adverse effects under NEPA after implementation of proposed mitigation measures in the following environmental resources:

- **Traffic, Parking, and Bicycle Facilities:** Traffic impacts would remain adverse under NEPA after implementation of proposed mitigation measures. Construction traffic impacts would also remain adverse under NEPA after implementation of proposed mitigation measures. In addition, existing bicycle lanes on Van Nuys Boulevard would be removed, and future bicycle lanes designated for implementation along Van Nuys Boulevard would not be feasible under the LPA and IOS, which would conflict with the City of Los Angeles Bicycle Plan. Therefore, impacts on bicyclists and bicycle facilities would remain adverse under NEPA after mitigation.
- **Land Use:** The LPA and IOS would result in land use incompatibility impacts or conflicts with environmental goals and policies in local land use plans due to traffic, noise, or other impacts that would remain adverse under NEPA after implementation of proposed mitigation measures.
- **Community and Neighborhood:** Under the LPA and IOS, the potential operational effects on bicycle access and safety, construction and operational effects on social and community interactions from business displacements, and operational visual effects on sensitive viewers would be adverse under NEPA after implementation of proposed mitigation measures.
- **Visual and Aesthetics:** The LPA and IOS would result in potentially adverse effects under NEPA on the visual environment within the project corridor. The visual changes in communities along the project corridor due to the introduction of new vertical structures (overhead contact system columns and wires), affecting scenic views of the surrounding mountains and foothills, would remain adverse under NEPA after mitigation.
- **Noise and Vibration:** Noise from construction of the LPA and IOS would result in adverse effects under NEPA. Although mitigation measures are proposed to reduce construction noise levels and effects would be temporary, construction noise levels could still exceed established thresholds, resulting in unavoidable adverse effects under NEPA.
- **Safety and Security:** The LPA and IOS would result in adverse effects under NEPA after mitigation on pedestrian sidewalk safety due to the narrowing of sidewalks and bicycle safety due to the removal of existing bike lanes as well as potential impacts on emergency vehicle response time due to turn restrictions and the increased congestion resulting from the removal of mixed-flow travel lanes.
- **Parklands and Community Facilities:** The LPA's and IOS's operational effects of the LPA and IOS on emergency vehicle access and visual impacts on sensitive viewers would be adverse under NEPA after implementation of proposed mitigation measures.

More information regarding the proposed project's environmental effects and impacts is provided in Chapter 3, Transportation, Transit, Circulation, and Parking, and Chapter 4, Environmental Analysis, Consequences, and Mitigation.

ES.7 Summary of Environmental Consequences and Mitigation Measures

Table ES-2, below, provides a summary of all environmental impacts of the LPA, IOS, and for comparison purposes, Alternatives 3 and 4 from the DEIS/DEIR. For further and more detailed information on Alternatives 3 and 4, please refer to the DEIS/DEIR, which is available at Metro headquarters and online at https://www.metro.net/projects/east-sfv/draft-eiseir/. For more details about each of the impacts as they pertain to the LPA and IOS, the reader is referred to Chapters 3, 4, and 5 of this FEIS/FEIR.

As indicated in Table ES-2, the LPA would not result in new significant impacts or substantially more severe significant impacts than those identified in the DEIS/DEIR. For that reason, recirculation of the DEIS/DEIR is not required.[2]

Table ES-3 includes a list of proposed mitigation measures. For mitigation measures proposed for Alternative 3 and 4, please refer to the DEIS/DEIR. Metro is committed to satisfying all applicable federal, state, and local environmental regulations and to applying reasonable mitigation measures to reduce adverse effects and significant impacts. Should the Metro Board of Directors approve the project, in accordance with CEQA regulations, it will adopt a Mitigation Monitoring and Reporting Program, which lists all of the committed mitigation measures. Upon approval of the proposed project, these mitigation measures will become part of the project, and will be considered binding under CEQA.

[2] Pursuant to Section 15088.5(a) of the State CEQA Guidelines: A lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review under Section 15087 but before certification. As used in this section, the term "information" can include changes in the project or environmental setting as well as additional data or other information. New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement. "Significant new information" requiring recirculation include, for example, a disclosure showing that: (1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented. (2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance. (3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it. (4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

Table ES-2: Summary of Environmental Impacts and Effects

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
Transportation, Transit, Circulation, and Parking (Chapter 3 of the FEIS/FEIR)					
Construction	**Transit and Traffic:** The LPA would be constructed over a period of approximately 4.5 to 5 years[3] and would result in temporary lane or street closures. **Parking:** From 7 a.m. to 7 p.m., on-street parking would be removed within each construction work zone. On-street parking would be permanently removed to accommodate operation of the LPA. **Pedestrian and Bicycle Facilities:** Existing bicycle lanes along Van Nuys Boulevard would be removed during construction. Pedestrian routes would be lengthened where minor intersections would be temporarily closed during construction.	**Transit and Traffic:** The IOS would be constructed over a period of approximately 4.5 to 5 years and would result in temporary lane or street closures. **Parking and Pedestrian and Bicycle Facilities:** Impacts would be the same as those that would occur under the LPA along Van Nuys Boulevard. The bike path within the Metro-owned railroad right-of-way would not have to be relocated as would occur under the LPA and DEIS/DEIR Alternative 4 because the IOS would not include the railroad right-of-way segment.	**Transit and Traffic:** Alternative 3 would be constructed over a period of approximately 4 years and would result in temporary lane or street closures. **Parking:** From 7 a.m. to 7 p.m., on-street parking would be removed within each construction work zone. On-street parking would be permanently removed to accommodate operation of Alternative 3. **Pedestrian and Bicycle Facilities:** Existing bicycle lanes along Van Nuys Boulevard would be removed during construction. Pedestrian routes would be lengthened where minor intersections would be temporarily closed during construction.	**Transit and Traffic:** Construction of Alternative 4 could take up to 5 years. The impacts would be greater than those that would occur under Alternative 3. **Parking and Pedestrian and Bicycle Facilities:** Impacts would be the same as those that would occur under Alternative 3.	**All Alternatives:** **CEQA:** Significant (transit, traffic, bicycle facilities) **NEPA:** Adverse (transit, traffic, bicycle facilities)

[3] This is the overall construction duration. Construction would occur in phases and would be divided into a series of activities, which would often overlap to minimize the duration of overall construction. Constructing in segments would also minimize the length of time construction activities occur in front of a particular block of properties, so properties are not affected during the entire duration of construction, but mainly when activities are occurring on that particular block.

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
Operation	**Transit Impacts:** The LPA would result in improved headways and travel times, and an increase of 9,549 daily transit trips. **Traffic Impacts**: the LPA would result in significant impacts at 20 of the 73 study intersections in the corridor in the AM or PM peak hours under the Future (Year 2040)-with-Project scenario. **Parking:** A total of 1,111 on-street parking spaces and 528 off-street parking spaces would be removed. **Pedestrian and Bicycle Facilities:** Project implementation would conflict with the City of Los Angeles Bicycle Plan, as designated bicycle lanes on Van Nuys Boulevard would not be feasible under the LPA. Existing bicycle lanes on Van Nuys Boulevard would be removed. However, it should be noted that the City of Los Angeles General Plan Framework Element designates the corridor as a Transit Priority Segment, which conflicts with the City of Los Angeles Bicycle Plan. Pedestrian routes would be lengthened where minor intersections would be closed. Remaining pedestrian crossings would be improved with enhanced design and safety features.	**Transit Impacts:** The IOS would result in improved headways and travel times, and an increase of 7,476 daily transit trips. **Traffic Impacts**: the IOS would result in significant impacts at 16 of the study intersections within the IOS extents. **Parking:** Impacts would be the same as those described for the LPA. **Pedestrian and Bicycle Facilities:** Impacts would be the same as those described for the LPA.	**Transit Impacts:** Alternative 3 would result in improved headways and travel times, and an increase of 8,452 daily transit trips. **Traffic Impacts**: Alternative 3 would result in significant LOS impacts at 32 of the 73 study intersections in the AM or PM peak hours under the Future-with-Project scenario. **Parking:** All 1,140 on-street parking spaces and 15 adjacent cross-street spaces would be removed. **Pedestrian and Bicycle Facilities:** Existing bicycle lanes on Van Nuys Boulevard would be removed.	**Transit Impacts:** Alternative 4 would result in improved headways and travel times, and an increase of 9,786 daily transit trips. **Traffic Impacts**: Alternative 4 would result in significant impacts at 20 of the 73 study intersections in the AM or PM peak hours under the Future-with-Project scenario. **Parking:** A total of 902 on-street parking spaces and 528 off-street parking spaces would be removed. **Pedestrian and Bicycle Facilities:** Impacts would be similar to those described for the LPA.	**All Alternatives:** **CEQA:** Significant (traffic, bicycle facilities). Parking is not considered a significant environmental impact under CEQA. **NEPA:** Adverse (traffic and bicycle facilities)

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
Land Use (Section 4.1 of the FEIS/FEIR)					
Construction	**Division of an Established Community:** Construction of the LRT and associated stations would require temporary sidewalk, lane, street closures, and traffic detours and designated truck routes. Street, lane, and sidewalk closures could reduce pedestrian and vehicle mobility between and within communities throughout the project study area during construction. Temporary lane and street closures are not expected to substantially divide or diminish access to existing communities or neighborhoods. **Conflict with Local Land Use Plans:** Construction activities would not conflict with applicable land use plans' or habitat conservation plans' environmental policies. **Incompatibility with Adjacent or Surrounding Land Uses:** Construction activities along the alignment could result in temporary nuisance impacts (e.g., noise, air quality impacts) on nearby land uses. Additionally, construction staging areas would be established near the project alignment and used for equipment and material storage.	**Division of an Established Community:** Impacts would be similar to those described for the LPA. **Conflict with Local Land Use Plans:** Construction activities would not conflict with applicable land use plans' or habitat conservation plans' environmental policies. **Incompatibility with Adjacent or Surrounding Land Uses:** Impacts would be similar to those described for the LPA.	Impacts would be similar to those described for the LPA.	Impacts would be similar to or potentially greater than those that would occur under the LPA and Alternative 3 due to the more extensive construction activities that would be required to construct the subway portion of the Alternative 4 alignment.	**All Alternatives:** **CEQA:** Less than significant **NEPA:** Not adverse

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
Operation	**Division of an Established Community:** This alternative would operate entirely within existing transportation corridors. Given that the alignment would be located along existing roadways and the fact that pedestrians and vehicles could still cross the alignment at specified locations throughout the corridor, this alternative would not divide an established community. **Conflict with Local Land Use Plans:** The LPA would be consistent with SCAG regional goals of encouraging land use and growth patterns that facilitate transit and non-motorized transportation and focusing growth along major transportation corridors in the region. However, the LPA would result in significant adverse traffic impacts at 20 of 73 study intersections in the corridor (Future-with-Project scenario) due to a reduction in the number of mixed-flow travel lanes to accommodate the LRT. The localized traffic impacts under the LPA would conflict with the congestion reduction goals and policies of local plans. Additionally, while bicycle lanes along Van Nuys Boulevard would not be possible under this alternative, the ability for bicyclists to access areas in the project corridor would be retained, and the project would achieve other	**Division of an Established Community:** Impacts would be similar to the impacts described for LPA. **Conflict with Local Land Use Plans:** Impacts would be the same as the impacts described for LPA. **Incompatibility with Adjacent or Surrounding Land Uses:** Impacts would be similar to the impacts described for LPA.	Operational impacts would be similar to those that would occur under the LPA. However, Alternative 3 could result in significant adverse traffic impacts at 32 of 73 study intersections along the corridor due to a reduction in the number of mixed-flow travel lanes to accommodate a dedicated LRT/tram.	Operational impacts would be slightly less than the LPA or Alternative 3 due to the subway segment. Similar to the LPA, Alternative 4 would result in localized traffic impacts at 20 of 73 study intersections, which would conflict with congestion reduction goals in local plans. Other land use plan conflict impacts would be similar to those described for the LPA and Alternative 3. **Incompatibility with Adjacent or Surrounding Land Uses:** Impacts would be similar to those described for the LPA and Alternative 3, with the exception that incompatibility impacts would be minimized or avoided along the subway portion of the alignment.	**All Alternatives:** **CEQA:** Significant (conflict with local land use plans due to increased traffic congestion) **NEPA:** Adverse (conflict with local land use plans due to increased traffic congestion)

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
	local planning goals of reducing reliance on the automobile and increasing transit ridership. **Incompatibility with Adjacent or Surrounding Land Uses:** While there would be some modifications to the project corridor (e.g., removal of traffic and bicycle lanes and changes in turning movements), the project corridor is an existing transportation route with ongoing bus transit service, and therefore, the LPA operations would generally be compatible with existing land uses. This alternative would require an overhead contact system to power the LRT vehicles, which would not conflict with adjacent and surrounding uses. Under this alternative, 14 stations would be in areas that are primarily commercial and residential. Stations would include aesthetic enhancements, such as landscaping, canopies, and artwork, which would be compatible with adjacent and surrounding land uses. The proposed MSF (MSF Option B) site is in a mainly industrial and commercial area. No residential properties are immediately adjacent to the site; therefore, the LPA would not be incompatible with local land uses. This alternative would also require TPSSs, which would be typically placed approximately every ¾ miles. To minimize or avoid land use incompatibility impacts to the				

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
	extent feasible, the majority of potential TPSS locations would be located near potential stations or the MSF.				
Real Estate and Acquisitions (Section 4.2 of the FEIS/FEIR)					
Construction	Construction of the LPA would require 68 full acquisitions, 30 partial acquisitions, one Metro-owned acquisition, and one acquisition of a vacant alley.	The IOS could require 83 acquisitions of properties, including 64 full acquisitions, 17 partial acquisitions, one Metro-owned property, and one acquisition of a vacant alley.	Construction of Alternative 3 would require 4 partial acquisitions and 62 full acquisitions of properties.	Construction of Alternative 4 would require 11 partial acquisitions and 93 full acquisitions of properties.	**All Alternatives:** **CEQA:** Less than significant **NEPA:** Not adverse
Operation	No operational impacts would occur.	No operational impacts would occur.	No operational impacts would occur.	No operational impacts would occur.	**All Alternatives:** **CEQA:** No impact **NEPA:** No effect
Economic and Fiscal Impacts (Section 4.3 of the FEIS/FEIR)					
Construction	The LPA could result in potential minor economic impacts on local businesses due to reduced visibility and diminished access resulting from sidewalk or lane closures, loss of on-street parking during construction, and permanent removal of on-street parking spaces. The LPA would require the acquisition of properties (34 full acquisitions, 30 partial acquisitions, one Metro-owned acquisition, and one acquisition of a vacant alley), which would result in the loss of an estimated $2.98 million in property taxes and would affect 2,723 jobs. However, construction work would result in direct, indirect, and induced impacts that would generate an estimated 20,525 jobs.	Impacts would be the same as those described for the LPA.	Alternative 3 impacts would be similar to those described for the LPA. The acquisition of properties under Alternative 3 would result in the loss of $460,000 in property taxes and 580 jobs. However, construction work would result in direct, indirect, and induced impacts that would generate new jobs.	Alternative 4 impacts would be similar to those described for the LPA. The acquisition of properties under Alternative 4 would result in the loss of $940,000 in property taxes and 1,285 jobs. However, construction work result in direct, indirect, and induced impacts that would generate new jobs.	**All Alternatives:** **CEQA:** Less than significant **NEPA:** Not adverse

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
Operation	Operational economic and fiscal impacts would be limited to the potential indirect impacts on local businesses that could occur where on-street parking would be removed to accommodate the LPA.	Impacts would be the same as those described for the LPA.	Impacts would be similar to those described for the LPA.	Impacts would be similar to those described for the LPA.	**All Alternatives:** **CEQA:** Less than significant **NEPA:** Not adverse
Communities and Neighborhoods (Section 4.4 of the FEIS/FEIR)					
Construction	**Mobility and Access Impacts:** Construction of the LRT tracks and stations would require temporary sidewalk, lane, and possibly road closures, and removal of parking on Van Nuys Boulevard, which could reduce pedestrian, bicycle, vehicle mobility between communities and neighborhoods along the project corridor. **Social and Economic Impacts:** Construction activities that result in lane and/or road closures and the loss of on-street or off-street parking would decrease accessibility to businesses and could adversely affect business activity. Construction would require additional permanent right-of-way acquisitions and the displacement of businesses, which could result in changes to the local neighborhood character and social fabric of the community. The viability of businesses that choose to relocate may be adversely affected while customers become accustomed to accessing new locations. Additionally, these locations may be psychologically or socially disruptive to neighborhood residents or	**Social and Economic Impacts:** Impacts would be similar to those described for the LPA. **Physical Impacts:** Impacts would be similar to those described for the LPA.	Impacts would be similar to those described for the LPA.	Alternative 4 would result in similar types of construction impacts to those described for the LPA; however, the impacts could be extensive and occur over a longer period of time because of the more extensive construction activities associated with the subway portion of the alignment.	**All Alternatives:** **CEQA:** Significant (removal of bike lanes) **NEPA:** Adverse (removal of bike lanes; community effects due to business displacements)

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
	visitors. The LPA, however, would not physically divide an established community. **Physical Impacts:** Construction activities would result in a number of physical impacts and intrusions, including noise, dust, odors, and traffic delays resulting from haul trucks and construction equipment located on public streets and staging areas. Visual impacts could occur due to temporary removal of vegetation from some areas and the presence of construction equipment and materials. During construction, motorists, pedestrians, and bicyclists would be exposed to additional safety hazards because of proximity to construction activities.				
Operation	**Mobility and Access Impacts:** Restrictions on motor vehicle movement (left turns) at unsignalized intersections and parking prohibition along Van Nuys Boulevard would present an inconvenience for vehicles traveling along the project corridor. The LPA would maintain pedestrian access to the project corridor, though existing 13-foot sidewalks would be narrowed to 10 feet in some locations and some pedestrian routes may be re-routed and would require additional walking distance because minor intersections would be permanently closed as part of project implementation.	**Mobility and Access Impacts:** Impacts would be similar to those described for the LPA. **Social and Economic Impacts:** Impacts would be similar to those described for the LPA but would result in reduced economic impacts because of fewer property acquisitions. **Physical Impacts:** Impacts would be similar to those described for the LPA but the IOS would not include the LPA segment along the railroad right-of-way and	Impacts would be similar to or slightly less than those described for the LPA because Alternative 3 would result in fewer property acquisitions.	Impacts would be similar or slightly greater than those described for the LPA due to greater number of property acquisitions, except for the subway segment of Alternative 4, which could avoid pedestrian access impacts and motor vehicle turn restrictions that could occur along this segment under the LPA and Alternative 3.	**All Alternatives:** **CEQA:** Significant (removal of bike lanes and visual impacts) **NEPA:** Adverse (removal of bike lanes, business displacements, and visual effects)

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
	Under the LPA, the existing Class II bike lanes on Van Nuys Boulevard would be removed to make room for the LRT tracks and stations, which would conflict with the City's Bicycle Plan and Mobility Plan. **Social and Economic Impacts:** Some areas would require property acquisitions to accommodate the LRT facilities. Displacements could result in substantial changes to local neighborhood character and potentially the social fabric of the local community, because neighborhood residents and visitors may be accustomed to accessing businesses in their existing locations and the displacement of those businesses could be psychologically or socially disruptive, and could affect professional and social interactions. If relocation sites are available within proximity to the existing business sites, the disruptions to professional and social interactions may be temporary as residents become accustomed to accessing the displaced businesses at their new locations. **Physical Impacts:** The median fences, overhead contact system, and pedestrian bridge, in particular, would introduce additional vertical elements that could substantially change the existing visual character and quality in the immediate vicinity of these elements. The potential exists for conflicts or	pedestrian bridge (or tunnel) at the Sylmar/San Fernando station and resulting potential visual impacts.			

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
	collisions between LRT vehicles and motor vehicles or pedestrians. The removal of the Class II bike lanes along Van Nuys Boulevard and use of alternate routes by bicyclists could increase the potential for conflicts between motor vehicles and bicyclists.				
Visual Quality and Aesthetics (Section 4.5 of the FEIS/FEIR)					
Construction	Construction of the LPA could result in temporary visual impacts; construction areas would be visible to all viewer groups from areas within and adjacent to the project corridor, including residential and recreational areas. Construction activities in staging areas and at proposed stations may include the use of large equipment such as cranes and associated vehicles, including bulldozers, backhoes, graders, scrapers, and trucks, which could be visible from public streets, sidewalks, and adjacent properties. Viewers in the construction area may be affected by the presence of this equipment, as well as stockpiled construction-related materials. In addition, mature vegetation, including trees, would need to be temporarily or permanently removed from some areas.	Impacts would be the same as those that would occur along Van Nuys Boulevard due to the LPA, but the IOS would not result in the impacts that could occur under the LPA along the railroad right-of-way segment.	Impacts would be similar to those described for the LPA.	Impacts would be similar to those described for the LPA; however, construction of the subway segment has the potential to result in greater visual impacts due to the more extensive construction activities.	**All Alternatives:** **CEQA:** Significant **NEPA:** Adverse

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
Operation	**Scenic Vistas:** Adverse effects may occur due to new vertical features in the landscape, particularly the overhead contact system. **Scenic Resources:** Existing scenic resources could be affected due to removal of some existing landscaping and street trees, including rows of palm trees along Van Nuys Boulevard. **Visual Character and Quality:** Visual character and quality would be affected by the presence of the LRT cars and new stations; however, views in the corridor as a whole would not be substantially affected. The MSF would have a similar industrial appearance to replaced buildings and thus would not have a substantial adverse effect on visual character and quality, though the TPSSs may slightly disrupt visual unity along the corridor. **Lighting, Glare, and Shading:** Lighting, glare, and shading would not change substantially except in residential areas where elements of the LPA could increase nighttime lighting.	**Scenic Vistas:** Impacts would be similar to those described for the LPA. **Scenic Resources:** Impacts would be similar to those described for the LPA. **Visual Character and Quality:** Impacts would be similar to those described for the LPA. **Lighting, Glare, and Shading:** Impacts would be similar to those described for the LPA.	Impacts would be similar to those described for the LPA.	Impacts would be similar to those described for the LPA; however, the subway segment of Alternative 4 would not include the visual elements of the LPA, i.e., OCS, that could result in adverse visual effects.	**All Alternatives:** **CEQA:** Significant **NEPA:** Adverse
Air Quality					
Construction	Construction of the LPA would result in the short-term generation of criteria pollutant emissions. Regional emissions for ROG and oxides of nitrogen (NOx) are expected to exceed the South Coast	Impacts would be the similar to those described for the LPA, but the IOS would not include the railroad right-of-way segment of the LPA; therefore, construction air	Construction of Alternative 3 would result in the short-term generation of criteria pollutant emissions. Regional emissions for ROG and oxides of nitrogen	Construction of Alternative 4 would result in the short-term generation of criteria pollutant emissions. Regional emissions for	**All Alternatives:** **CEQA:** Significant **NEPA:** Not adverse

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
	Air Quality Management District (SCAQMD) regional emissions thresholds. Localized NOx, PM_{10}, and $PM_{2.5}$ emissions during construction would exceed local thresholds. The greatest potential for toxic air contaminant (TAC) emissions would be related to diesel particulate matter (DPM) emissions associated with operation of heavy construction equipment.	quality impacts would affect a smaller area than the LPA.	(NOx) are expected to exceed the South Coast Air Quality Management District (SCAQMD) regional emissions thresholds. Localized NOx, PM_{10}, and $PM_{2.5}$ emissions during construction would exceed local thresholds. The greatest potential for toxic air contaminant (TAC) emissions would be related to diesel particulate matter (DPM) emissions associated with operation of heavy construction equipment.	ROG and oxides of nitrogen (NOx) are expected to exceed the South Coast Air Quality Management District (SCAQMD) regional emissions thresholds. Localized NOx, PM_{10}, and $PM_{2.5}$ emissions during construction would exceed local thresholds. The greatest potential for toxic air contaminant (TAC) emissions would be related to diesel particulate matter (DPM) emissions associated with operation of heavy construction equipment.	
Operation	Operation of the LPA would result in reductions in regional criteria pollutant emissions relative to the No- Build Alternative, and emissions would not exceed SCAQMD thresholds. Based on the LPA's lower intersection approach volumes, idle emissions, and grams/mile emissions relative to the 2003 AQMP attainment demonstration, there would be no potential for the LPA carbon monoxide (CO) emissions at any intersection to result in an exceedance of either the	Operational impacts under the IOS would be similar to those identified under the LPA, with the exception that the IOS would have lower ridership due to the shorter alignment. The reduced ridership would mean that some individuals would take other modes of transportation, and a portion of these individuals would use passenger vehicles. As such, VMT and associated emissions would be higher under the IOS than under the LPA. However,	Under Alternative 3, both ROG and NOx emissions are anticipated to exceed SCAQMD significance criteria under the Future (year 2040)-with-Project scenario. All remaining criteria pollutant emissions under Alternative 3 would not exceed SCAQMD significance thresholds. No emissions thresholds would be exceeded in the 2012 (Existing with Project) scenario.	Regional criteria pollutant emissions under Alternative 4 would not exceed SCAQMD significance thresholds.	**All Alternatives:** **CEQA:** Less than significant **NEPA:** Not adverse

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
	National Ambient Air Quality Standards (NAAQS) or California Ambient Air Quality Standards (CAAQS) for CO. Operation of the LPA would not generate new air quality violations, worsen existing violations, or delay attainment of national Ambient Air Quality Standards (AAQS) for $PM_{2.5}$ and PM_{10}. The LPA would also not result in a material change in regional MSAT pollutant emissions, when compared to the No-Build Alternative.	given that the IOS would introduce a new LRT service where none exists at present, project-related air pollutant emissions are anticipated to be lower than under the No-Build Alternative. For reasons similar to those identified for the LPA, the IOS is not expected to result in exceedances of SCAQMD thresholds, generation of CO or PM hot-spots, or generation of substantial MSAT/TAC emissions.	Although the SCAQMD regional operational emissions thresholds would be exceeded under the Future (Year 2040)-with-Project scenario, SCAQMD's operational emissions significance thresholds are based on emissions from stationary sources. Because the primary source of operational emissions would be mobile sources (due to changes in auto circulation patterns), the SCAQMD thresholds are provided for informational purposes only. The proposed project's requirement to demonstrate transportation conformity ensures that project emissions are accounted for in the SIP, which demonstrated attainment of the federal ozone standard. As such, ozone precursor emissions of ROG and NOx would be less than significant. Overall operational emissions under Alternative 3 would be less than significant under CEQA and would not be adverse under NEPA.		

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
Greenhouse Gas Emissions (Section 4.7 of the FEIS/FEIR)					
Construction	LPA construction activities would result in the emission of approximately 5,877 metric tons of CO_2e. Consistent with SCAQMD-recommended methodology, construction-period emissions were amortized over a 30-year period, resulting in an annual equivalent of approximately 196 metric tons of CO_2e.	IOS construction activities would result in an estimated 3,740 metric tons of CO_2e emissions.	Alternative 3 construction activities would result in the emission of approximately 4,025 metric tons of CO_2e over the course of the construction period, or approximately 134 metric tons per year amortized over a 30-year period.	Alternative 4 construction activities would result in the emission of approximately 19,900 metric tons of CO_2e over the course of the construction period, or approximately 633 metric tons per year amortized over a 30-year period.	Since impact determinations consider the combined effect of construction and operational GHG emissions, please see the impact determinations below for Operation.
Operation	Traffic operations under the LPA would result in an annual emissions reduction of approximately 25,380 metric tons of CO_2e compared with the future (2040) baseline condition vehicle emissions, a decrease of 0.05% in regional GHG emissions from vehicles. Operation of the MSF would be responsible for an additional 1,416 metric tons of CO_2e emitted annually. LRT vehicle propulsion and station operation would result in the emission of 12,904 metric tons of CO_2e per year. Construction and operation of the LPA combined would result in a reduction of 10,878 metric tons of CO_2e, which is equivalent to a 0.02% reduction compared to the 2040 No-Build baseline.	Traffic operations under the IOS would result in an annual emissions reduction of approximately 20,751 metric tons of CO_2e, a decrease of 0.04%. Including the amortized construction emissions and operation of facilities and vehicles, implementation of the IOS would result in an approximately 9,800-MT decrease (0.02%) in study area GHG emissions compared to the 2040 No-Build baseline.	Traffic operations under Alternative 3 would result in the annual emission of approximately 44,019 metric tons of CO_{2e} above future (2040) baseline vehicle emissions, an increase of 0.072%. Construction and operation of the LPA combined would result in an increase of 58,473 metric tons of CO_2e, a 0.096% increase compared to the 2040 No-Build baseline.	Traffic operations under Alternative 4 would result in the annual emission of approximately 28,998 MT of CO_2e above future (2040) baseline vehicle emissions, a decrease of 0.05%. Construction and operation of the LPA combined would result in a reduction of 14,015 metric tons of CO_2e, a 0.023% decrease compared to the 2040 No-Build baseline.	**LPA, IOS, and Alternative 4:** **CEQA:** Less than significant/ Beneficial **NEPA:** Not adverse/ Beneficial **Alternative 3 (DEIS/DEIR):** **CEQA:** Significant **NEPA:** Not adverse

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
Noise and Vibration (Section 4.8 of the FEIS/FEIR)					
Construction	**Noise and Vibration:** Construction of the LPA would result in a predicted noise level from a typical 8-hour work-shift of 87 dBA (8-hour L_{eq}) at 50 feet, which is about 15 to 20 decibels higher than the ambient noise level. Construction activities, such as pavement breaking and the use of tracked vehicles such as bulldozers could result in noticeable levels of ground-borne vibration. These activities would be limited in duration and vibration levels are likely to be well below thresholds for minor cosmetic building damage. However, the predicted vibration levels for equipment that produces the highest levels of vibration, such as a vibratory roller, is about equal to the construction vibration NEPA and CEQA significance threshold for non-engineered and timber masonry buildings at a distance of 25 feet.	**Noise and Vibration:** Construction of the IOS would result in noise and vibration levels similar to those for the LPA along the Van Nuys Boulevard segment. The IOS would not include the northern 2.5-mile segment of the LPA and consequently would not result in any noise or vibration impacts along that segment.	**Noise and Vibration:** Construction of Alternative 3 would result in noise and vibration impacts that are similar to those that would occur under the LPA.	**Noise:** Impacts resulting from the construction of Alternative 4 would be similar to those that would occur under the LPA and Alternative 3, with the exception being that Alternative 4 includes tunneling, Noise impacts from tunnel boring machines are expected to be less-than-significant, because operations take place underground. **Vibration:** Ground-borne noise and vibration impacts associated with tunneling are likely to be less than significant because tunneling would only take place within the right-of-way. However, an assessment of tunneling operations should be including in the Construction Vibration Control Plan because ground-borne noise and vibration levels from tunneling are highly dependent on the means and methods selected by the contractor.	**All Alternatives:** **CEQA:** Significant (noise only) **NEPA:** Adverse (noise only)

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
Operation	**Noise and Vibration:** The predicted noise levels due to operation of LRT vehicles would exceed the NEPA and CEQA significance thresholds at eight clusters of residences. Moderate noise impacts are predicted at an additional 67 clusters of sensitive receivers. The predicted vibration levels would exceed the NEPA and CEQA significance threshold at 24 clusters of residential receivers and two institutional land use areas. Traditional crossovers can increase vibration levels by up to 10 dB at nearby receivers. Due to the close proximity of receivers to the alignment, predicted vibration levels assume the use of low-impact devices such as spring or conformal frogs, which increase vibration levels less dramatically, by around 5 dB. Without the low-impact frogs, impacts are predicted at 6 additional residential and 2 additional institutional locations.	**Noise:** Impacts would be the same as those described for the LPA along Van Nuys Boulevard. **Vibration:** Impacts would be the same as those described for the LPA along Van Nuys Boulevard.	**Noise and Vibration:** The predicted noise levels due to operation of LRT vehicles would exceed the NEPA and CEQA significance thresholds at three clusters of residences. Moderate noise impacts are predicted at an additional 30 clusters of sensitive receivers. The predicted vibration levels would exceed the NEPA and CEQA significance threshold at 17 clusters of sensitive residential receivers and one institutional land use.	**Noise and Vibration:** The predicted noise levels due to operation of LRT vehicles would exceed the NEPA and CEQA significance thresholds at two clusters of residences. Moderate noise impacts are predicted at an additional 59 clusters of sensitive receivers. The predicted vibration levels would exceed the NEPA and CEQA significance threshold at 21 clusters of sensitive residential receivers and one institutional land use. Impacts from ground-borne noise could occur at four clusters of residential uses six institutional uses near the tunnel section of Alternative 4.	**All Alternatives:** **CEQA:** Less than significant **NEPA:** Not adverse
Geology, Soils and Seismicity (Section 4.9 of the FEIS/FEIR)					
Construction	Potential impacts due to construction of the LRT would be the same as those that would occur as result of a typical construction project and could include damage to existing utilities and undermining of existing structures and potential geologic/soils hazards to construction workers. Compliance	Impacts would be the same as those described for the LPA along Van Nuys Boulevard.	Alternative 3 construction impacts would be similar to those that would occur under the LPA.	Alternative 4 impacts would be similar to those that would occur under the LPA and Alternative 3, except that under this alternative, the tunneling and deep excavations during	**All Alternatives** **CEQA:** Less than significant **NEPA:** Not adverse

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
	with best construction practices and adherence to regulatory requirements would reduce potential risks to existing structures, the public, and construction workers.			construction could cause vertical and lateral movement of the existing soils adjacent to the improvements. Alternative 4 could also be affected by groundwater hazards during construction due to the depth of excavation.	
Operation	On the north end of the alignment, the proposed pedestrian bridge or underpass for the Sylmar/San Fernando Metrolink station is within an Alquist-Priolo Geologic Hazards Zone. In addition, the Pacoima Wash Bridge on San Fernando Road is in a City of Los Angeles Fault Rupture Study Area. If further studies indicate that there is a potential for fault rupture at the proposed Sylmar/San Fernando Metrolink station pedestrian crossing and/or the Pacoima Wash Bridge on San Fernando Road, the fault rupture hazards to these project facilities could be significant. Other project structures along the alignment including the Pacoima Channel Bridge, traffic and pedestrian signs, and train stop canopies would be subject to strong seismic ground shaking and could pose a hazard to riders and passers-by. In addition, the proposed catenary wires, traffic and pedestrian signs, and train stop	IOS impacts would be similar to those described those for the LPA, but the IOS would not include the northern 2.5-mile segment of the LPA and thus would not be exposed to the hazards that could affect the pedestrian bridge or tunnel at the Sylmar/San Fernando Metrolink station and the Pacoima Wash Bridge. Similar to the LPA, the IOS would be constructed in accordance with codes and regulatory requirements.	Alternative 3 operational impacts would be similar to those that would occur under the LPA.	The operational impacts of Alternative 4 would be similar those that would occur under the LPA and Alternative 3, with the exception of the tunnel segment. Because of the presence of alluvial soils, the tunnel segment of the alignment could be susceptible to seismic-induced settlement and ground loss, a potentially significant hazard.	**All Alternatives** **CEQA:** Less than significant **NEPA:** Not adverse

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
	canopies south of Vanowen Street would be subject to potential liquefaction hazards. The catenary wires would move during a seismic event and the system, like other light rail systems currently operated by Metro, would need to be inspected prior to continuing service. Since the project would be designed in compliance with current building codes and regulatory requirements, the impacts/effects during operation of the LPA would be less than significant under CEQA and not adverse under NEPA.				
Hazardous Waste and Materials (Section 4.10 of the FEIS/FEIR)					
Construction	Hazardous materials could be encountered during grading and excavation, though work would generally be limited to within the upper 5 feet of soil. It is likely that lead and arsenic may have been deposited within the soil along the project alignment and could occur at hazardous levels. Yellow thermoplastic paint markings on roadway pavement to be removed may contain lead and other heavy metals such as chromium. Dust created from construction activities may contain hazardous contaminants. Construction equipment contains fuel, hydraulic oil, lubricants, and other hazardous materials, which could be released accidentally. Deeper construction excavations for	Impacts from the IOS would be the same as those that would occur due to the LPA along the Van Nuys Boulevard segment. However, the IOS would not include the northern 2.5-mile segment of the LPA, and as a consequence, the IOS would result in no impacts along that segment.	Alternative 3 construction impacts would be similar to those that could occur under the LPA.	Construction for at-grade portions of the project would result in similar impacts to Alternative 3 or LPA, with the exception of the subway/tunnel segment of Alternative 4. The cut and cover/tunneling portion of this alternative would consist of excavations as deep as 80 feet, with piles extending deeper. The tunnel would cross beneath former and current manufacturing and industrial sites that may contain soils containing hydrocarbons, VOCs,	**All Alternatives:** **CEQA:** Less than significant **NEPA:** Not adverse

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
	the retrofit or replacement of structures crossing the Pacoima Wash or the foundations for the new pedestrian crossing at the San Fernando Metrolink Station could result in the potential for encountering groundwater contaminated by volatile organic compounds (VOCs). Lead-based paint (LBP) and asbestos containing material (ACM) may be encountered in waste building materials during demolition of existing structures for the MSF and TPSSs facilities.			and other hazardous waste constituents. The southern end of the proposed tunnel would potentially be located below historically high groundwater levels, which may be contaminated with hazardous materials.	
Operation	The MSF will use and store hazardous materials including fuels, lubricants, and paints, for maintenance of the rail vehicles. The LRT vehicles would be electrically powered and would not contain fuels that could be released to the environment in the event of an accident or mechanical failure.	Impacts would be similar to those described for the LPA.	The operational impacts of Alternative 3 would be similar to those of the LPA.	Alternative 4 would result in operational impacts similar to those of the LPA and Alternative 3. However, the tunnel and below grade stations proposed under this alternative have the potential for vapor intrusion from soil and groundwater contamination.	**All Alternatives:** **CEQA:** Less than significant **NEPA:** Not adverse
Energy (Section 4.11 of the FEIS/FEIR)					
Construction	Diesel fuel for construction vehicles and equipment would be the primary source of energy used throughout the course of the construction period. In total, the 4.5- to 5-year construction period would result in the consumption of approximately 61,809 MMBTU of energy. Although an estimated 445,000 gallons of fuel would be consumed by construction vehicles	Construction of the IOS would result in the consumption of approximately 48,387 MMBTU of energy.	Construction of Alternative 3 would result in impacts similar to those for the LPA and would result in the consumption of 55,000 MMBTU and 400,000 gallons of fuel.	Alternative 4 would result in the consumption of 273,600 MMBTU and 1.975 million gallons of fuel.	**All Alternatives:** **CEQA:** Less than significant **NEPA:** Not adverse

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
	and equipment, the estimated consumption would be limited to the construction period, would be temporary in nature, and would represent a negligible increase in regional demand, and an insignificant amount relative to the more than 18 billion gallons of on-road fuels used in the state in 2013 (California Energy Commission 2014b). Given the extensive network of fueling stations throughout the project vicinity and the fact that construction would be short-term, no new or expanded sources of energy or infrastructure would be required to meet the energy demands due to LPA construction activities. Additionally, construction activities would comply with the Metro Green Construction Policy and all construction equipment would be maintained in accordance with manufacturers' specifications so equipment performance would not be compromised.				
Operation	Operation of the LPA would result in the consumption of both fuels and electricity. Overall operational energy consumption under the LPA would decrease by 48,657 MMBTU or 0.005% relative to the existing (2012) baseline. Under the Future (2040)-with-Project scenario, energy consumption would decrease by 281,621 MMBTU or 0.039% relative to the future (Year 2040) baseline condition. Operation of the LPA	Overall operational energy consumption under the IOS would decrease by 51,686 MMBTU or 0.006% relative to the existing (2012) baseline. Under the Future (2040)-with-Project scenario, energy consumption would decrease by 234,831 MMBTU or 0.032% relative to the future (Year 2040) baseline condition. Operation of the	Overall operational energy consumption under Alternative 3 would increase relative to existing (2012) baseline conditions by 49,674 MMBTU or 0.005%. Under the Future-with-Project scenario, operational energy consumption would increase by 626,734 MMBTU compared to year	Overall operational energy consumption under Alternative 4 would decrease relative to future (Year 2040) baseline conditions by 291,752 MMBTU or 0.037%. Similar to the LPA and Alternative 3, Alternative 4 would not result in the wasteful, inefficient, or	**All Alternatives:** **CEQA:** Less than significant **NEPA:** Not adverse

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
	would not result in the wasteful, inefficient, or unnecessary consumption of energy.	IOS would not result in the wasteful, inefficient, or unnecessary consumption of energy.	2040 baseline conditions. However, similar to the LPA, Alternative 3 would not result in the wasteful, inefficient, or unnecessary consumption of energy.	unnecessary consumption of energy.	
Ecosystems/Biological Resources (Section 4.12 of the FEIS/FEIR)					
Construction	**Special-Status Plants and Animals:** There is a potential for pallid bat, western yellow bat, and big free-tailed bat to occur in the study area. Construction activities could affect nesting birds or roosting bats if construction activities remove vegetation where nesting birds are present or affect structures or vegetation used by special-status bat species. **Conflict with Local Polices:** Construction could require the removal of trees protected by the City of LA and/or San Fernando tree ordinances. Removal of protected trees would conflict with the city ordinances.	Impacts would be similar to those discussed for the LPA, with the exception that no impacts would occur along the northern 2.5-mile segment of the LPA.	Construction impacts under Alternative 3 would be similar to those that would occur under the LPA.	Construction impacts under Alternative 4 would be similar to those that would occur under the LPA and Alternative 3.	**All Alternatives:** **CEQA:** Less than significant **NEPA:** Not adverse
Operation	Installation of the overhead contact system lines for the LRT would potentially have an impact on avian species by increasing line collisions and electrocution risks. However, the project is planned within an existing urban area, and wildlife species in the area are urban-tolerant.	Impacts would be the same as those discussed for the LPA.	The operational impacts of Alternative 3 would be similar to those that would occur under the LPA.	The operational impacts of Alternative 3 would be similar to or slightly less (due to the subway segment) than those that would occur under the LPA and Alternative 3.	**All Alternatives:** **CEQA:** Less than significant **NEPA:** Not adverse

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
Water Resources/Hydrology and Water Quality (Section 4.13 of the FEIS/FEIR)					
Construction	**Water Quality:** Construction of the LPA could result in an increase in surface water pollutants such as sediment, oil and grease, and miscellaneous wastes. Because construction activities would disturb more than 1 acre, preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) would be required, in accordance with the statewide National Pollutant Discharge Elimination System General Permit for Stormwater Discharges Associated with Construction Activity (Order No. 2009-0009-DWA, NPDES No. CAR000002) (Construction General Permit). The SWPPP would list BMPs that would be implemented to protect stormwater runoff and include monitoring of BMP effectiveness. **Stormwater and Drainage:** Use of groundwater would be minimal and temporary. Construction activities could result in increased erosion. Temporary drainage facilities could be required to redirect runoff from work areas. Construction of the LPA would not require the use of substantial volumes of surface water. In addition, construction activities would not substantially change the overall impervious area, nor would construction substantially change stormwater flows that could affect either the volume or movement of water in surface water bodies.	Construction of the IOS would result in similar or slightly reduced impacts (because of shorter length and smaller project footprint) than those described for the LPA.	Alternative 3 construction impacts would be similar to those that would occur under the LPA.	Alternative 4 would result in similar impacts to those that would occur under the LPA and Alternative 3, with the exception of impacts on groundwater supplies and recharge, as described below. **Groundwater:** Dewatering would likely be required for the underground stations and could potentially be required for utility relocation or replacement depending on local groundwater levels. Adherence to dewatering requirements of the Los Angeles RWQCB, and minimal water use during construction would ensure that impacts on groundwater would be less than significant under CEQA and the effects would not be adverse under NEPA.	**All Alternatives:** **CEQA:** Less than significant **NEPA:** Not adverse

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
Operation	The LPA would result in very minor increases in impervious surfaces, which would have a minimal effect on groundwater supplies and recharge. Activities associated with operation of the MSF—including fueling, cleaning, and repairing—have the potential to degrade water quality. Water consumption due to the MSF is not expected to result in an appreciable reduction in local water supplies. Drainage patterns would not be substantially altered with implementation of the LPA, and the flood zones, which are confined to existing drainage channels, would not be adversely affected by LPA operations. Most of the project alignment is within a dam failure inundation zone associated with the Sepulveda and Hansen Flood Control Basins (and associated dams). LPA facilities could be affected in the event of dam failure. However, the LPA would not increase the risk of dam failure.	Impact for the IOS would be similar to those described for the LPA.	Operational impacts due to Alternative 3 would be similar to those that could occur under the LPA.	Operational impacts of Alternative 4 would be similar to those that could occur under the LPA and Alternative 3. However, there is a potential for flooding at the underground stations proposed under Alternative 4.	**All Alternatives:** **CEQA:** Less than significant **NEPA:** Not adverse
Safety and Security (Section 4.14 of the FEIS/FEIR)					
Construction	Construction of the LPA may have temporary adverse effects on public safety and security within the project study area. During construction, motorists, pedestrians, and bicyclists in close proximity to construction activities would	Impacts for the IOS would be similar to or less than those described for the LPA due to the IOS's shorter length and smaller project footprint.	Alternative 3 construction impacts would be similar to those that could occur under the LPA.	Alternative 4 construction impacts would be similar to those that could occur under the LPA and Alternative 3, though increased safety hazards	**All Alternatives:** **CEQA:** Less than significant **NEPA:** Not adverse

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
	experience circulation impacts and could be exposed to hazards posed by construction activities and equipment. Construction activities could also result in lane closures, traffic detours, and designated truck routes, which could adversely affect emergency vehicle response time. The potential for significant safety and security impacts would be minimized by compliance with Occupational Safety and Health Administration (OSHA), California Occupational Safety and Health Administration (Cal/OSHA), and Metro safety and security programs, which are designed to reduce potential adverse effects during construction. Incidents of crime adjacent to the project alignment would most likely not substantially increase during construction. Incidents of property crime could occur at construction sites (e.g., theft of construction machinery and materials), but they would be minimized through implementation of standard site security practices by contractors.			could occur along the subway segment of Alternative 4, particularly if cut-and-cover construction methods are used and due to the longer construction duration.	
Operation	**Pedestrian, Vehicle, and Bicycle Safety:** The removal of bike lanes would increase the potential for conflicts between bicyclists and motor vehicles, reducing safety, which would be a potentially adverse effect and significant impact. Sidewalks along Van Nuys Boulevard, which are	Impacts would be similar those described for the LPA.	Impacts would be similar to those that would occur under the LPA.	Impacts would be similar to those that would occur under the LPA and Alternative 3.	**All Alternatives: CEQA:** Significant (removal of bike lanes resulting in increased potential for conflicts between bicyclists and motor vehicles; increased delay for

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
	approximately 13 feet wide, would be narrowed to 10 feet, potentially increasing crowding, particularly in the vicinity of stations or stops. **Security:** The LPA is not expected to result in a substantial increase in crime. The removal of mixed-flow lanes would result in additional roadway congestion due to the decreased roadway capacity, which could adversely affect emergency vehicle response times and access or evacuation plans in the event of an emergency. The proposed motor vehicle turn restrictions could also result, in some instances, in emergency vehicles taking a slightly more circuitous route and therefore requiring more time to respond to emergencies.				emergency responders due to increased congestion) **NEPA:** Adverse
Parklands and Community Facilities (Section 3.15 of the FEIS/FEIR)					
Construction	The LPA would not require the physical acquisition, displacement, or relocation of parklands and community facilities. However, construction activities could result in a range of impacts on nearby parklands and community facilities including air quality, noise, visual, and traffic impacts.	Impacts would be similar to those impacts that could occur to parks along Van Nuys Boulevard under the LPA; however, the IOS would not result in impacts on parks and community facilities along the Metro-owned railroad right-of-way because it does not include that segment of the LPA.	Alternative 3 construction impacts would be similar to those that would occur under the LPA.	Alternative 4 would result in similar or potentially greater construction impacts than the LPA or Alternative 3, particularly in the vicinity of the subway segment if cut-and-cover construction methods are used or in the vicinity of the tunnel portals.	**All Alternatives:** **CEQA:** Less than significant **NEPA:** Not adverse

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
Operation	No right-of-way acquisitions would be required, and this alternative would not result in the physical acquisition, displacement, or relocation of parklands and community facilities. Operation of the LRT could result in increased noise at parklands and community facilities. Implementation of the LPA would introduce new vertical elements (e.g., OCS) that could result in substantial changes to the aesthetic character in areas along the corridor containing recreational areas or parklands. The LPA would result in increased congestion and significant impacts at a number of study intersections along the corridor due to the reduction in mixed-flow lanes, which could have an adverse effect on emergency access.	Impacts due to the IOS would be similar to those described for the LPA. However, the IOS would not result in any operational impacts on parks and community facilities along the railroad right-of-way because it would not include the northern 2.5-mile segment of the LPA.	Alternative 3 operational impacts would be similar to those that could occur under the LPA.	The operational impacts of Alternative 4 would be similar to those that could occur under the LPA or Alternative 3, except the operational noise and traffic impacts would be less because the subway portion (south of Sherman Way to Parthenia Street) of the Alternative 4 alignment would avoid the at-grade impacts of the LPA and Alternative 3 for that section of the alignment.	**All Alternatives:** **CEQA:** Significant (emergency vehicle access; visual impacts) **NEPA:** Adverse (emergency vehicle access; visual impacts)
Historic, Archaeological, and Paleontological Resources (Section 4.16 of the FEIS/FEIR)					
Historic Resources - Construction	Under the LPA, there are four historic properties that have a potential to be affected by the construction of the proposed LRT structures or stations. None of the buildings within the APE appear to be Building Category IV, such as an adobe building, so the lowest possible threshold of vibration damage would be 0.2 in/sec PPV. The highest predicted level of vibration for a station is the use of a vibratory roller at 0.21 in/sec PPV from a distance of 25 feet.	Impacts from the IOS would be similar to those described for the LPA.	Impacts would be similar to those that would occur under the LPA.	Impacts would be similar to those that would occur under the LPA and Alternative 3. Pile drivers could be used in the construction of underground stations, which could produce vibration levels that could affect one historic property. However, the property is located far enough away that equipment	**All Alternatives:** **CEQA:** Less than significant **NEPA:** Not adverse

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
	• 130 N. Brand Boulevard– Approximately 600 feet from proposed Maclay Station • 6353 Van Nuys Boulevard – Approximately 75 feet from proposed Victory Station • 8324 Van Nuys Boulevard – Approximately 40 feet from proposed Roscoe Station • 9110 Van Nuys Boulevard – Approximately 40 feet from proposed Nordhoff Station Because the four properties above are more than 25 feet away from the proposed construction areas, equipment used for the construction of a station would not exceed the predicted FTA damage risk vibration limits. There are no historic properties that have the potential to be affected by construction of the MSF. In addition, construction of the LPA would not result in alterations to or demolition of any historic properties. Therefore, the LPA would not result in adverse effects on any historic properties during construction.			used would not exceed the FTA damage risk vibration limits.	
Historic Resources – Operation	The operational effects that could occur to historic properties under the LPA would include potential visual effects due to OCS, TPSS, and MSF facilities. There are 10 historic properties within the APE. There is the potential for operational effects due to the	The impacts associated with the IOS would be similar to those described for the LPA.	Impacts would be similar to those that could occur under the LPA.	Impacts would be similar to those that could occur under the LPA and Alternative 3.	**All Alternatives:** **CEQA:** Less than significant **NEPA:** Not adverse

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
	introduction of new visual elements on seven of the 10 properties. However, no significant or adverse visual impacts would occur.				
Archaeological Resources – Construction	The LPA would generally involve shallow excavation, with some exceptions, to construct LRT tracks, OCS, stations, narrow sidewalks, and other project facilities. Archaeological sites 19-001124 and 19-002681 are within and adjacent to the footprint of the LPA. Even though neither resource is considered eligible for the National Register of Historic Places, California Register of Historical Resources, or a historical resource under CEQA, the immediate resource areas are still considered sensitive for containing previously undiscovered archaeological resources. The LPA has a low potential to adversely affect other archaeological resources that may be present but have not been previously identified within the project footprint. However, since construction would involve earth-disturbing activities, it is still possible that archaeological resources or human remains may be discovered and damaged or destroyed during construction.	Due to the fact that the IOS project limits do not include the archaeological sites described for the LPA, it would not have impacts on known archeological resources. Similar to the LPA, the IOS has low potential to adversely affect other archaeological resources that may be present but have not been previously identified within the project footprint.	The two identified archaeological sites are not located within the footprint of Alternative 3 and therefore would not be affected by construction activities. Other impacts would be similar to those that would occur under the LPA.	Alternative 4 would result in similar or potentially greater impacts to the LPA due to the more extensive excavations required to construct the subway segment, which has a moderate potential for ground-disturbing activities to expose and affect previously unknown significant archaeological resources.	**All Alternatives:** **CEQA:** Less than significant **NEPA:** Not adverse
Archaeological Resources – Operation	The LPA would result in no operational impacts or effects on archaeological resources.	The IOS would result in no operational impacts or effects on archaeological resources.	Operation of Alternative 3 would result in no impacts or effects on archaeological resources.	Alternative 4 would result in no operational impacts or effects on archaeological resources.	**All Alternatives:** **CEQA:** No impact **NEPA:** No effect

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
Paleontological Resources – Construction	The LPA would involve construction within the Quaternary alluvium. Shallow excavations would not affect paleontological resources, since the affected resources are too young to contain fossils. However, deeper excavations have the potential to affect paleontologically sensitive Quaternary older alluvium, which is known to contain Pleistocene fossils between depths of 14 and 100 feet in the San Fernando Valley.	Impacts as a result of the IOS would be similar to or slightly less than those described for the LPA due to the IOS having a smaller project footprint.	Impacts would be similar to those that could occur under the LPA.	Impacts would be similar or potentially greater than those that would occur under the LPA or Alternative 3 due to the greater excavation and depth of excavation that would be required to construct the subway tunnel.	**All Alternatives:** **CEQA:** Less than significant **NEPA:** Not adverse
Paleontological Resources – Operation	Operation of the LPA would result in no impacts or effects on paleontological resources.	Operation of the IOS would result in no impacts or effects on paleontological resources.	Operation of Alternative 3 would result in no impacts or effects on paleontological resources.	Alternative 4 would result in no operational impacts or effects on paleontological resources.	**All Alternatives:** **CEQA:** No impact **NEPA:** No effect
Environmental Justice (Section 4.18 of the FEIS/FEIR)					
Construction	**Mobility and Access Impacts:** Construction of LRT stations and the transit alignment would require temporary sidewalk, lane, and road closures, and the removal of parking. These closures could reduce pedestrian, bicycle, and vehicle access to areas along the project corridor. These temporary effects are anticipated to affect all communities within the project study area and communities adjacent to the project study area comparably. **Social and Economic Impacts:** Construction activities would likely result in a decrease in accessibility to many businesses and could	Impacts to environmental justice populations would be similar to those identified for the LPA. However, the IOS would require fewer property acquisitions.	Impacts would be similar to those that could occur under the LPA.	Impacts would be similar to or potentially greater than those that could occur under the LPA and Alternative 3, because of the more extensive construction required to construct the subway segment of Alternative 4. However, similar to the other alternatives, Alternative 4 impacts would affect all environmental justice populations comparably.	**All Alternatives:** **NEPA:** No disproportionately high and adverse effects on environmental justice populations would occur

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
	reduce on-street and off-street parking, which may negatively affect business activity levels because the number of customers may temporarily decline. Construction activities would take place throughout the project corridor, and the temporary decrease in accessibility would affect all businesses comparably. **Physical Impacts:** Construction activities could result in noise, dust, odors, and traffic delays. Local neighborhoods, businesses, and community facilities may be inconvenienced temporarily, and community activities could be disrupted by construction. Construction of the LPA may also result in several visual impacts and temporary effects on public safety and security within the project study area. Because the project would comply with regulatory requirements and measures would be implemented to mitigate construction impacts, and because the potential effects are anticipated to affect all communities within the project study area comparably, regardless of the block groups' socioeconomic or demographic characteristics, the LPA would not result in disproportionately high and adverse effects on minority or low-income populations with respect to construction.				

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
	Displacement of Businesses, Housing, and People: The LPA would require 68 full acquisitions, 30 partial acquisitions, one Metro-owned acquisition, and one acquisition of a vacant alley. The majority of the acquisitions would be from light manufacturing and commercial properties. These businesses are located in low-income and/or minority neighborhoods, and therefore, the displacement impacts of the LPA would be predominantly borne by an environmental justice population. However, all communities within the project study area would be affected, and the impacts suffered by the environmental justice populations would not be appreciably more severe or greater in magnitude than the adverse effects that would be suffered by the non-environmental justice populations.				
Operation	**Mobility and Access Impacts:** The LPA would enhance connections to public transportation within the project study area and across the region. The LRT would be available to all communities throughout the project study area as well as communities adjacent to the project study area, regardless of socioeconomic or demographic characteristics. Under the LPA, curbside parking along Van Nuys Boulevard would be	Impacts as a result of the IOS would be the same as those identified under the LPA. However, only 18 of the study intersections have adverse effects.	Impacts would be similar to those that would occur under the LPA.	Impacts would be similar to those that would occur under the LPA and Alternative 3.	**All Alternatives:** **NEPA:** No disproportionately high and adverse effects on environmental justice populations would occur

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
	prohibited, which could affect vehicle access to businesses and community resources. However, available adjacent on-street parking and/or off-street parking areas can meet the weekday and weekend on-street parking demand for the area. Under the LPA, the existing bike lanes along Van Nuys Boulevard north of Parthenia Street would be removed, which would be expected to affect all bicyclists regardless of socioeconomic or demographic characteristics. Conversion of existing mixed-flow lanes to dedicated LRT facilities would decrease roadway capacity for mixed-flow traffic. As a consequence, this alternative would result in adverse effects on 20 of the 73 study intersections within the corridor, which could reduce access for emergency vehicle response or interfere with emergency evacuation plans. Traffic impacts are anticipated to affect all emergency calls or travelers within the project study area comparably, regardless of socioeconomic or demographic characteristics. **Social and Economic Impacts:** The LPA would not result in disproportionate effects on or fewer benefits for minority or low-income populations with respect to improved economic conditions. Transit connectivity would be improved throughout the entire				

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
	project corridor. Therefore, the LPA would not result in disproportionate effects on or fewer benefits for minority or low-income populations with respect to community cohesion. **Physical Impacts:** The LPA would be designed in compliance with Metro design guidelines to ensure pedestrian, motorist, and bicyclist safety; however, the removal of existing Class II bike lanes would increase the potential for conflicts between bicyclists and motor vehicles. Because the changes to the bike lanes along Van Nuys Boulevard would be expected to affect all bicyclists within an approximate 4-mile radius comparably, regardless of socioeconomic or demographic characteristics, disproportionately high and adverse effects on environmental justice populations are not anticipated.				
Growth-Inducing Impacts (Section 4.19 of the FEIS/FEIR)					
Induce substantial population growth in an area either directly or indirectly	The anticipated increase in long-term employment would be relatively minor and would not result in a significant increase in the project study area population. Therefore, the LPA would not directly induce substantial residential or employment population growth. This alternative may indirectly result in growth along the corridor and within the project study area. However, it	IOS impacts would be similar to or slightly less than the LPA's because of the shorter length of the IOS.	Impacts would be similar to those that would occur under the LPA.	Impacts would be similar to those that would occur under the LPA and Alternative 3.	**All Alternatives:** **CEQA:** Less than significant **NEPA:** Not adverse

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
	would not extend transit service to undeveloped areas and would be located in a developed urban area. Therefore, it would not indirectly induce growth that would substantially change existing land use and development patterns at the corridor level.				
Irreversible and Irretrievable Commitments of Resources (Section 4.20 of this FEIS/FEIR)					
Construction and Operation	Construction would entail the one-time irreversible and irretrievable commitment of nonrenewable resources, such as energy (fossil fuels used for construction equipment) and construction materials (such as lumber, sand, gravel, metals, and water). Land used to construct the proposed facilities is considered an irreversible commitment during the period the land is used. The project would commit land at stations and the maintenance facility to transit use. This commitment of long-term land resources is consistent with the policies of the County of Los Angeles and the Cities of Los Angeles and San Fernando to promote transit-oriented uses. Accidents could occur during construction as a result of safety hazards posed by construction activities and equipment including construction site accidents that could affect construction workers or the environment and potential conflicts with or accidents	Impacts would be similar to or slightly less than those that could occur under the LPA because of the shorter length of the IOS.	Impacts would be similar to those that would occur under the LPA.	Impacts would be similar to or greater than those that would occur under the LPA and Alternative 3 due to the more extensive construction required to construct the subway segment of Alternative 4.	**CEQA:** Less than significant **NEPA:** Not adverse

Affected Resource	Alternative				
	Locally Preferred Alternative (LPA)	Initial Operating Segment (IOS)	Alt. 3 – Low-Floor LRT/Tram (DEIS/DEIR)	Alt. 4 – LRT (DEIS/DEIR)	Level of Impacts (CEQA) and Effects (NEPA) after Mitigation
	involving pedestrians, bicyclists, and motorists in close proximity to construction activities. The consumption of nonrenewable resources includes water, petroleum products, and electricity. In addition, fossil fuels would be used for transporting workers and materials during construction, and electricity and fuel would be used for trains, stations, and worker vehicles for maintenance and operation during the life of the project. The consumption amount and rate of these resources would not result in significant environmental impacts or the unnecessary, inefficient, or wasteful use of such resources, because they would increase transit use (which increases energy efficiency) and decrease automobile dependence (which uses fossil fuels).				

Table ES-3: Proposed Mitigation Measures

Affected Resource	Mitigation Measures
Transportation, Transit, Circulation, and Parking (Chapter 3 of this FEIS/FEIR)	
Construction	**MM-TRA-1:** The Traffic Management Plan shall require Metro to communicate closures and information on any changes to bus service to local transit agencies in advance and develop detours as appropriate. Bus stops within work areas shall be relocated, with warning signs posted in advance of the closure, and warnings and alternate stop notifications posted during the extent of the closure. **MM-TRA-2:** The Traffic Management Plan shall include the following typical measures, and others as appropriate: • Schedule a majority of construction-related travel (i.e., deliveries, hauling, and worker trips) during the off-peak hours. • Develop detour routes to facilitate traffic movement through construction zones without significantly increasing cut-through traffic in adjacent residential areas. • Where feasible, temporarily restripe roadways including turning lanes, through lanes, and parking lanes at the affected intersections to maximize the vehicular capacity at those locations affected by construction closures. • Where feasible, temporarily remove on-street parking to maximize the vehicular capacity at those locations affected by construction closures. In these areas where street parking is temporarily removed in front of businesses, the contractor shall provide wayfinding to other nearby parking lots or temporary lots, with any temporary parking secured well in advance of parking being removed in the affected area. • Place station traffic control officers at major intersections during peak hours to minimize delays related to construction activities. • Assign a Construction Relations team inclusive of a manager, senior officers, and social media strategist to develop and implement the Metro Board's adopted Construction Relations model. The team will conduct the outreach program to inform the general public about the construction process, planned roadway closures, and anticipated mitigations through community briefings in public meeting spaces and use of signage (banners, etc.). • Develop and implement a program with business owners to minimize effects to businesses during construction activities, including but not limited to signage, Eat, Shop, Play, and promotional programs. • Consult and seek input on the designation and identification of haul routes and hours of operation for trucks with the local jurisdictions, school districts, and Caltrans. The selected routes should minimize noise, vibration, and other effects. • To the extent practical, maintain traffic lanes in both directions, particularly during the morning and afternoon peak hours. • Maintain access to adjacent businesses and schools (including passenger loading areas for parents dropping off students) via existing or temporary driveways or loading areas throughout the construction period. • Coordinate potential road closures and detour routes and other construction activities that could adversely affect vehicle routes in the immediate vicinity of local schools with local school districts. • Install and maintain appropriate traffic controls (signs and signals) to ensure vehicular safety. **MM-TRA-3:** To ensure potential impacts on pedestrian and bicycle facilities are minimized to the extent feasible, the Traffic Management Plan and Traffic Control Plan shall include the following: • Bicycle detour signs shall be provided, as appropriate, to route bicyclists away from detour areas with minimal-width travel lanes and onto parallel roadways. • Sidewalk closure and pedestrian route detour signs shall be provided, as appropriate, that safely route pedestrians around work areas where sidewalks are closed for safety reasons or for specific construction work within the sidewalk area. In addition, the project contractor shall ensure appropriate "Open during Construction," wayfinding, and promotional signage for businesses affected by sidewalk closures is provided and access to these businesses is maintained.

Affected Resource	Mitigation Measures
Operation	**MM-TRA-4:** During the Preliminary Engineering phase of the project, Metro will work with the Cities of Los Angeles and San Fernando to synchronize and coordinate signal timing and to optimize changes in roadway striping to minimize potential operational traffic impacts and hazards to the extent feasible. **MM-TRA-5:** Additional visual enhancements, such as high-visibility crosswalks that meet current LADOT design standards, to the existing crosswalks at each proposed station location shall be implemented to further improve pedestrian circulation. **MM-TRA-6:** To further reduce potential adverse and less-than-significant pedestrian impacts, Metro shall prepare a First/Last Mile study that documents preferred pedestrian access to each station, general pedestrian circulation in the immediate vicinity of the station, and potential sites for connections to nearby bus services. The purpose of this study shall include ensuring sufficient circulation, access, and information important to users of the transit system. The results of the study shall be implemented through coordination between Metro and the local jurisdictions of the City of Los Angeles and the City of San Fernando. **MM-TRA-7:** To reduce the potential impacts due to remove of the existing bike lanes extending approximately 2 miles north on Van Nuys Boulevard from Parthenia Street to Beachy Avenue and from Laurel Canyon Boulevard to San Fernando Road, two parallel corridors have been identified for consideration and approval by the Los Angeles Department of Transportation (LADOT) as bike friendly corridors. These include Filmore Street to the west and Pierce Street to the east, which can be developed as Class III Bike Friendly streets by striping sharrows and providing signage. Metro shall also continue to work with LADOT to identify, to the extent feasible, replacement locations for Class II bike lanes that meet the goals and policies in the City of Los Angeles Bicycle Plan.
Land Use (Section 4.1 of this FEIS/FEIR)	
Construction	**MM-NOI-1a–1d, MM-VIB-1,** and **MM-AQ-1–9.**
Operation	**MM-NOI-2a, MM-NOI2b, MM-NOI-3a, MM-NOI-3b,** and **MM-NOI-3c.**
Real Estate and Acquisitions (Section 4.2 of this FEIS/FEIR)	
Construction	None required.
Operation	None required.
Economic and Fiscal Impacts (Section 4.3 of this FEIS/FEIR)	
Construction	**MM-TRA-1, MM-TRA-2, MM-TRA-3,** and **MM-CN-1**.
Operation	None required.
Communities and Neighborhoods (Section 4.4 of this FEIS/FEIR)	
Construction	**MM-TRA-1–3, MM-VIS-1–5, MM-AQ-1–9, MM-NOI-1a–1d, MM-NOI-2a–2b, MM-NOI-3a–3c,** and **MM-SS-1–23.** In addition, the following measure is proposed: **MM-CN-1:** A formal educational and public outreach campaign shall be implemented to discuss potential community and neighborhood concerns, including relocations, visual/aesthetics changes, and fare policies, and to communicate information about the project with property owners and community members.
Operation	See mitigation measures listed in Chapter 3, Transportation, Transit, Circulation, and Parking; Section 4.5, Visual Quality and Aesthetics; Section 4.8, Noise and Vibration; and Section 4.14, Safety and Security sections of this table that would be implemented to minimize operational impacts on communities and neighborhoods.

Affected Resource	Mitigation Measures
Visual Quality and Aesthetics (Section 4.5 of this FEIS/FEIR)	
Construction	**MM-VIS-1:** Construction staging shall be located away from residential and recreational areas and shall be screened to minimize visual intrusion into the surrounding landscape. The screening shall be a height and type of material that is appropriate for the context of the surrounding land uses. There shall be Metro-branded community-relevant messaging on the perimeter of the construction staging walls. Lighting within construction areas shall face downward and shall be designed to minimize spillover lighting into adjacent properties.
Operation	**MM-VIS-2:** Vegetation removal shall be minimized and shall be replaced following construction either in-kind or following the landscaping design palette for the project, which would be prepared in consultation with the City of Los Angeles and San Fernando, including the City Tree Removal Policy and replacement ratio. **MM-VIS-3:** Scenic resources, including landscape elements such as rows of palm trees (along Van Nuys Boulevard) or mature trees (along San Fernando Road) and uniform lighting, shall be preserved, where feasible. **MM-VIS-4:** Lighting associated with the project shall be designed to face downward and minimize spillover lighting into adjacent properties, in particular residential and recreational properties. **MM-VIS-5:** Infrastructure elements shall be designed with materials that minimize glare.
Air Quality (Section 4.6 of this FEIS/FEIR)	
Construction	**MM-AQ-1:** Construction vehicle and equipment trips and use shall be minimized to the extent feasible and unnecessary idling of heavy equipment shall be avoided. **MM-AQ-2:** Solar powered, instead of diesel powered, changeable message signs shall be used. **MM-AQ-3:** Electricity from power poles, rather than from generators, shall be used where feasible. **MM-AQ-4:** Engines shall be maintained and tuned per manufacturer's specifications to perform at EPA certification levels and to perform at verified standards applicable to retrofit technologies. Periodic, unscheduled inspections shall be conducted to limit unnecessary idling and to ensure that construction equipment is properly maintained, tuned, and modified consistent with established specifications. **MM-AQ-5:** Any tampering with engines shall be prohibited and continuing adherence to manufacturer's recommendations shall be required. **MM-AQ-6:** New, clean (diesel or retrofitted diesel) equipment meeting the most stringent applicable federal or state standards shall be used, and the best available emissions control technology shall be employed. Tier 4 engines shall be used for all construction equipment. If non-road construction equipment that meets Tier 4 engine standards is not available, the Construction Contractor shall be required to use the best available emissions control technologies on all equipment. **MM-AQ-7:** EPA-registered particulate traps and other appropriate controls shall be used where suitable to reduce emissions of diesel particulate matter (PM) and other pollutants at the construction site. **MM-AQ-8:** Consistent with South Coast Air Quality Management District Rule 1113, all architectural coatings for building envelope associated with the project shall use coatings with a Volatile Organic Compound content of 50 grams per liter or less. **MM-AQ-9:** The Design-Builder shall implement feasible means and methods that would minimize cumulative air quality impacts during the construction period, including, but not limited to, the following: 1. Timing project-related construction activities associated with the maintenance facility, stations, and track installation such that overlapping schedules are minimized. 2. Timing project-related construction activities so that overlapping schedules with other projects in the area are avoided. 3. Reducing the number of pieces of diesel-fueled equipment used at a given time when construction activities occur in the vicinity of sensitive receptors, including, but not limited to residences, schools, parks, hospitals, and nursing homes.
Operation	None required.

Affected Resource	Mitigation Measures
Greenhouse Gas Emissions (Section 4.7 of this FEIS/FEIR)	
Construction and Operation	**MM-AQ-1**, **MM-AQ-2**, **MM-AQ-3**, and **MM-AQ-6.**
Noise and Vibration (Section 4.8 of this FEIS/FEIR)	
Construction	**MM-NOI-1a:** Specific measures to be employed to mitigate construction noise impacts shall be developed by the contractor and presented in the form of a Noise Control Plan. The Noise Control Plan shall be submitted for review and approval before the beginning of construction noise activities. **MM-NOI-1b:** The contractor shall adequately notify the public of construction operations and schedules no less than 72 hours in advance of construction through a construction notice with confirmed details and a look-ahead briefing several weeks in advance. **MM-NOI-1c:** If a noise variance from Section 41.40(a) of the Los Angeles Municipal Code is sought for nighttime construction work, a noise limit shall be specified. The contractor shall employ a combination of the noise-reducing approaches listed in MM-NOI-1d to meet the noise limit. **MM-NOI-1d:** Where feasible, the contractor shall use the following noise-reducing approaches: • The contractor shall use specialty equipment with enclosed engines and/or high-performance mufflers. • The contractor shall locate equipment and staging areas as far from noise-sensitive receivers as possible. • The contractor shall limit unnecessary idling of equipment. • The contractor shall install temporary noise barriers to enclose stationary noise sources, such as compressors, generators, laydown and staging areas, and other noisy equipment. • The contractor shall reroute construction-related truck traffic away from residential buildings to the extent practicable. • The contractor shall sequence the use of equipment so that simultaneous use of the loudest pieces of equipment is avoided as much as practicable. • The contractor shall avoid the use of impact equipment and, where practicable, use non-impact equipment. Non-impact equipment could include electric or hydraulic-powered equipment rather than diesel and gasoline-powered equipment where feasible. • The contractor shall use portable noise control enclosures for welding in the construction staging area. • The contractor shall use lined or covered storage bins, conveyors, and chutes with noise-deadening material for truck loading and operations. • The contractor shall use strobe lights or other OSHA-accepted methods rather than back-up alarms during nighttime construction. **MM-NOI-1e:** If the proposed mitigation measures identified in this section do not reduce the identified significant noise impacts on Los Angeles Unified School District schools to a less-than-significant level, Metro shall develop new and appropriate measures, to the extent feasible, to effectively reduce construction-related or operational noise. Provisions shall be made to allow the affected school or designated representative(s) to notify Metro when such measures are warranted. **MM-VIB-1:** Where equipment, such as a vibratory roller, that produces high levels of vibration is used near buildings, the Construction Vibration Control Plan shall also include mitigation measures to minimize vibration impact during construction. Recommended construction vibration mitigation measures that shall be considered and implemented where feasible include: • The contractor shall minimize the use of tracked vehicles. • The contractor shall avoid vibratory compaction. • The contractor shall monitor vibration levels near sensitive receivers during activities that generate high vibration levels to ensure thresholds are not exceeded.

Affected Resource	Mitigation Measures
Operation	**MM-NOI-2a:** A sound wall shall be constructed at the northern edge of the alignment where the LRT curves to transition between Van Nuys Boulevard and San Fernando Road, in the area bounded by Pinney Street, El Dorado Avenue, Van Nuys Boulevard, and San Fernando Road. The sound wall shall be constructed to mitigate the increase in traffic noise levels that would result from removing the row of buildings in this area. Sound walls should be constructed in such a fashion as to not impair the train operator vision triangle sightlines. **MM-NOI-2b:** Friction control shall be incorporated into the design for the curves at Van Nuys Boulevard/San Fernando Road, Van Nuys Boulevard/El Dorado Boulevard, and Van Nuys Boulevard/Vesper Avenue. Friction control may consist of installing lubricators on the rail or using an onboard lubrication system that applies lubrication directly to the wheel. **MM-NOI-3a:** The following noise limit shall be included in the purchase specifications for the TPSS units: TPSS noise shall not exceed 50 dBA at a distance of 50 feet from any part of a TPSS unit. **MM-NOI-3b:** The TPSS units shall be located within the parcel as far from sensitive receivers as feasible. If possible, the cooling fans shall be oriented away from sensitive receivers. **MM-NOI-3c:** If necessary, a sound enclosure shall be built around the TPSS unit to further reduce noise levels at sensitive receivers to below the applicable impact threshold. Predicted vibration levels could be reduced to below the CEQA significance thresholds at all sensitive receivers with traditional floating-slab track and use of low-impact frogs. A floating slab consists of a concrete slab supported by rubber or steel springs. Floating slab is the most expensive vibration mitigation measure; however, it provides the most reduction in vibration levels. Further investigation may show that vibration levels could be reduced to below the applicable thresholds with a less expensive option, such as a continuous-mat floating slab. Low-impact frogs such as conformal frogs and spring frogs result in a smoother transition over the gaps, reducing noise and vibration levels. Conformal frogs smooth the transition through wing slopes, which match the wheel profile, and spring frogs use a spring-loaded mechanism. A moveable point frog includes a signal mechanism that allows trains running on the mainline to avoid any gaps in the rail, eliminating the noise and vibration impact of the special trackwork. Moveable point frogs are required mitigation measures in areas where other low-impact frogs do not provide enough vibration reduction. **MM-VIB-2a:** Metro shall complete additional vibration analysis to confirm the locations where vibration levels would exceed CEQA significance thresholds. Where exceedances would occur, the contractor shall employ methods to reduce vibration to levels below applicable thresholds. A floating-slab track, a continuous-mat floating slab, or a vibration-isolated embedded track system, such as QTrack, could be considered. **MM-VIB-2b:** The contractor shall install moveable point frogs at the crossovers on Van Nuys Boulevard/Osborne Street and at Van Nuys Boulevard/Canterbury Avenue. If further investigation confirms that an alternative low-impact frog would reduce vibration levels below the applicable thresholds, the alternative may be installed. **MM-VIB-2c:** Low-impact frogs such as conformal frogs or spring frogs shall be used at all crossovers and turnouts not covered under MM-VIB-2b. Traditional crossovers may be used in locations where analysis shows vibration levels will not exceed the applicable thresholds at nearby sensitive receivers.
Geology, Soils and Seismicity (Section 4.9 of this FEIS/FEIR)	
Construction	None required
Operation	**MM-GEO-1:** Metro design criteria require probabilistic seismic hazard analyses (PSHA) to estimate earthquake loads on structures. These analyses take into account the combined effects of all nearby faults to estimate ground shaking. During Final Design, site-specific PSHAs shall be used as the basis for evaluating the ground motion levels along the project corridor. The structural elements of the proposed project shall be designed and constructed to resist or accommodate appropriate site-specific estimates of ground loads and distortions imposed by the design earthquakes and conform to Metro's Design Standards for the Operating and Maximum Design Earthquakes. The concrete structures will be designed according to the Building Code Requirements for Structural Concrete (ACI 318) by the American Concrete Institute.

Affected Resource	Mitigation Measures
	MM-GEO-2: At liquefaction or seismic settlement prone areas, evaluations by geotechnical engineers shall be performed during Final Design to provide estimates of the magnitude of the anticipated liquefaction or settlement. Based on the magnitude of evaluated liquefaction, either structural design, or ground improvement (such as deep soil mixing) or deep foundations to non-liquefiable soil (such as drilled piles) measures shall be selected. Site-specific design shall be selected based on State of California guidelines and design criteria set forth in the Metro Seismic Design Criteria
Hazardous Waste and Materials (Section 4.10 of this FEIS/FEIR)	
Construction	**MM-HAZ-1:** An environmental investigation shall be performed during design for transit structures, TPSS locations, stations, and the MSF. The environmental investigation shall collect soil, groundwater, and/or soil gas samples to delineate potential areas of contamination that may be encountered during construction or operations. The environmental investigation shall include the following: • Properties potentially to be acquired are listed on multiple databases and shall be evaluated further for contaminants that were manufactured, stored, or released from the facility. If contaminated soil (e.g., soil contaminated from organic wastes, sediments, minerals, nutrients, thermal pollutants, toxic chemicals, and/or other hazardous substances) is found, it shall be removed, transported to an approved disposal location, and remediated according to state law. • Phase II subsurface investigations for potential impacts from adjoining current or former UST sites and nearby LUST sites. • A Phase II subsurface investigation to evaluate potential presence of PCE shall be performed along the portions of the project alignment that are adjacent to former and current dry cleaners. If contaminated soil is found, it shall be removed, transported to an approved disposal location, and remediated according to state law. • If construction encroaches into the two former plugged and abandoned dry-hole oil exploration wells mapped adjacent to the proposed project right-of-way, the project team shall consult with DOGGR regarding the exact locations of the abandoned holes and the potential impact of the wells on proposed construction. • The locations of proposed improvements involving excavations adjacent to (within 50 feet of) the electrical substation shall be screened prior to construction by testing soils within 5 feet of the existing ground surface for PCBs. If contaminated soil is found, it shall be removed, transported to an approved disposal location, and remediated according to state law. • Buildings that will be demolished shall have a comprehensive ACM inspection prior to demolition. In addition, ACM may be present in the existing bridge crossings at the Pacoima Diversion Channels. If improvements associated with the proposed project will disturb the existing bridge crossings, then these structures shall be evaluated for suspect ACM. If ACM is found, it shall be removed, and transported to an approved disposal location according to state law. • Areas where soil may be disturbed during construction shall be tested for ADL according to Caltrans ADL testing guidelines. If contaminated soil is found, it shall be removed, transported to an approved disposal location, and remediated according to state law. • Lead and other heavy metals, such as chromium, may be present within yellow thermoplastic paint markings on the pavement. These surfacing materials shall be tested for LBP prior to removal. If contaminated soil is found, it shall be removed, transported to an approved disposal location, and remediated according to state law. • Former railroad rights-of-way that crossed or were adjacent to the project right-of-way may contain hazardous materials from the use of weed control, including herbicides and arsenic, and may also contain Treated Wood Waste (TWW). Soil sampling for potentially hazardous weed control substances shall be conducted for health and safety concerns in the event that construction earthwork involves soil removal from the former railroad rights-of-way. If encountered during construction, railroad ties designated for reuse or disposal (including previously salvaged railroad ties in the project right-of-way) shall be managed or disposed of as TWW in accordance with Alternative Management Standards provided in CCR Title 22 Section 67386.

Affected Resource	Mitigation Measures
	MM-HAZ-2: The contractor shall implement a Worker Health and Safety Plan prior to the start of construction activities. All workers shall be required to review the plan, receive training if necessary, and sign the plan prior to starting work. The plan shall identify properties of concern, the nature and extent of contaminants that could be encountered during excavation activities, appropriate health and environmental protection procedures and equipment, emergency response procedures including the most direct route to a hospital, and contact information for the Site Safety Officer. **MM-HAZ-3:** The contractor shall implement a Contaminated Soil/Groundwater Management Plan during construction to establish procedures to follow if contamination is encountered in order to minimize associated risks. The plan shall be prepared during the final design phase of the project, and the construction contractor shall be held to the level of performance specified in the plan. The plan shall include procedures for the implementation of the following measures: • Contacting appropriate regulatory agencies if contaminated soil or groundwater (e.g., groundwater contaminated from organic wastes, sediments, minerals, nutrients, thermal pollutants, toxic chemicals, and/or other hazardous substances) is encountered • Sampling and analysis of soil and/or groundwater known or suspected to be impacted by hazardous materials • The legal and proper handling, storage, treatment, transport, and disposal of contaminated soil and/or groundwater shall be delineated and conducted in consultation with regulatory agencies and in accordance with established statutory and regulatory requirements in Section 4.10.1.1 of this FEIS/FEIR • Implementation of dust control measures such as soil wetting, wind screens, etc., for contaminated soil • Groundwater collection, treatment, and discharge shall be performed according to applicable standards and procedures listed in Section 4.10.1.1 of this FEIS/FEIR **MM-HAZ-4:** The contractor shall properly maintain equipment and properly store and manage related hazardous materials, so as to prevent motor oil, or other potentially hazardous substances used during construction, from spilling onto the soil. If contaminated soil is found, it shall be removed, transported to an approved disposal location, and remediated according to state law. **MM-HAZ-5:** For reconstruction of the Pacoima Wash bridge that crosses Metro right-of-way, the construction spoils (e.g., excavated soils, cuttings generated during installation of CIDH piles), including those in contact with the groundwater, shall be contained and tested for total chromium, 1,4-dioxane, trichloroethylene (TCE), and PCE to determine appropriate disposal. **MM-HAZ-6:** A Contaminated Soil/Groundwater Management Plan shall be prepared during final design that describes appropriate methods and measures to manage contamination encountered during construction.
Operation	None required
Energy (Section 4.11 of this FEIS/FEIR)	
Construction	None required.
Operation	None required.
Ecosystems/Biological Resources (Section 4.12 of this FEIS/FEIR)	
Construction	**MM-BIO-1: Avoid and Minimize Project-Related Impact on Special-Status Bat Species** In the maternity season (April 15 through August 31) prior to the commencement of construction activities, a field survey shall be conducted by a qualified biologist to determine the potential presence of colonial bat roosts (including palm trees) on or within 100 feet of the project boundaries. Should a potential roost be identified that will be affected by proposed construction activities, a visual inspection and/or one-night emergence survey shall be used to determine if it is being used as a maternity-roost. To avoid any impacts on roosting bats resulting from construction activities, the following measures shall be implemented:

Affected Resource	Mitigation Measures
	Bridges and Overpasses • Should potential bat roosts be identified that will require removal, humane exclusionary devices shall be used. Installation would occur outside of the maternity season and hibernation period (February 16-April 14 and August 16-October 30, or as determined by a qualified biologist) unless it has been confirmed as absent of bats. If the roost has been determined to have been used by bats, the creation of alternate roost habitat shall be required, with CDFW consultation. The roost shall not be removed until it has been confirmed by a qualified biologist that all bats have been successfully excluded. • Should an active maternity roost be identified, a determination (in consultation with the California Department of Fish and Wildlife or a qualified bat expert) shall be made whether indirect effects of construction-related activities (i.e., noise and vibration) could substantially disturb roosting bats. This determination shall be based on baseline noise/vibrations levels, anticipated noise-levels associated with construction of the proposed project, and the sensitivity to noise-disturbances of the bat species present. If it is determined that noise could result in the temporary abandonment of a day-roost, construction-related activities shall be scheduled to avoid the maternity season (April 15 through August 31), or as determined by the biologist. **Trees** All trees to be removed as part of the project shall be evaluated for their potential to support bat roosts. The following measures would apply to trees to be removed that are determined to provide potential bat roost habitat by a qualified biologist. • If trees with colonial bat roost potential require removal during the maternity season (April 15 through August 31), a qualified bat biologist shall conduct a one-night emergence survey during acceptable weather conditions (no rain or high winds, night temperatures above 52˚F) or if conditions permit, physically examine the roost for presence or absence of bats (such as with lift equipment) before the start of construction/removal. If the roost is determined to be occupied during this time, the tree shall be avoided until after the maternity season when young are self-sufficiently volant. • If trees with colonial bat roost potential require removal during the winter months when bats are in torpor, a state in which the bats have significantly lowered their physiological state, such as body temperature and metabolic rate, due to lowered food availability. (October 31 through February 15, but is dependent on specific weather conditions), a qualified bat biologist shall physically examine the roost if conditions permit for presence or absence of bats (such as with lift equipment) before the start of construction. If the roost is determined to be occupied during this time, the tree shall be avoided until after the winter season when bats are once again active. • Trees with potential colonial bat habitat can be removed outside of the maternity season and winter season (February 16 through April 14 and August 16 through October 30, or as determined by a qualified biologist) using a two-step tree trimming process that occurs over 2 consecutive days. On Day 1, under the supervision of a qualified bat biologist, Step 1 shall include branches and limbs with no cavities removed by hand (e.g., using chainsaws). This will create a disturbance (noise and vibration) and physically alter the tree. Bats roosting in the tree will either abandon the roost immediately (rarely) or, after emergence, will avoid returning to the roost. On Day 2, Step 2 of the tree removal may occur, which would be removal of the remainder of the tree. Trees that are only to be trimmed and not removed would be processed in the same manner; if a branch with a potential roost must be removed, all surrounding branches would be trimmed on Day 1 under supervision of a qualified bat biologist and then the limb with the potential roost would be removed on Day 2. • Trees with foliage (and without colonial bat roost potential), such as sycamores, that can support lasiurine bats, shall have the two-step tree trimming process occur over one day under the supervision of a qualified bat biologist. Step 1 would be to remove adjacent, smaller, or non-habitat trees to create noise and vibration disturbance that would cause abandonment. Step 2 would be to remove the remainder of tree on that same day. For palm trees that can support western yellow bat (the only special-status lasiurine species with the potential to occur in the project area), shall use the two-step tree process over two days. Western yellow bats may move deeper within the dead fronds during disturbance. The two-day process will allow the bats to vacate the tree before removal.

Affected Resource	Mitigation Measures
	MM BIO-2: Avoid Impacts on Nesting Birds (including raptors) To avoid any impacts on migratory birds, resulting from construction activities that may occur during the nesting season, March 1 through August 31, the following measure shall be implemented: • A qualified biologist shall conduct a preconstruction survey of the proposed construction alignment with a 150-foot buffer for passerines and 500-feet for raptors around the site. This preconstruction survey shall commence no more than 3 days prior to the onset of construction, such as clearing and grubbing and initial ground disturbance. • If a nest is observed, an appropriate buffer shall be established, as determined by a qualified biologist, based on the sensitivity of the species. For nesting raptors, the minimum buffer shall be 150 feet. The contractor shall be notified of active nests and directed to avoid any activities within the buffer zone until the nests are no longer considered to be active by the biologist. **MM BIO-3: Jurisdictional Waters** Any work resulting in materials that could be discharged into jurisdictional features shall adhere to strict best management practices (BMPs) to prevent potential pollutants from entering any jurisdictional feature. Applicable BMPs to be applied shall be included in the Stormwater Pollution Prevention Plan and/or Water Quality Management Plan and shall include, but not be limited to, the following BMPs as appropriate: • Containment around the site shall include use of temporary measures such as fiber rolls to surround the construction areas to prevent any spills of slurry discharge or spoils recovered during the separation process; • Downstream drainage inlets shall be temporarily covered to prevent discharge from entering the storm drain system; • Construction entrances/exits shall be properly set up so as to reduce or eliminate the tracking of sediment and debris offsite by including grading to prevent runoff from leaving the site, and establishing "rumble racks" or wheel water points at the exit to remove sediment from construction vehicles; • Onsite rinsing or cleaning of any equipment shall be performed in contained areas and rinse water shall be collected for appropriate disposal; • Use of a tank on work sites to collect the water for periodic offsite disposal; • Soil and other building materials (e.g., gravel) stored onsite shall be contained and covered to prevent contact with stormwater and offsite discharge; and • Water quality of runoff shall be periodically monitored before discharge from the site and into the storm drainage system. **MM BIO-4: A Project Tree Report Shall Be Approved by the City of Los Angeles and City of San Fernando** Prior to construction, the contractor shall review the approved alternative alignment to determine whether any trees protected by the City of Los Angeles Tree Ordinance 177404 and City of San Fernando Comprehensive Tree Management Program Ordinance (Ordinance No. 1539) will be removed or trimmed. A tree report must be prepared, by a qualified arborist, for the project and approved by each city. Trees approved for removal (or replacement) shall be done in accordance with the specifications outlined in the city ordinances.
Operation	None required.
Water Resources/Hydrology and Water Quality (Section 4.13 of this FEIS/FEIR)	
Construction	None Required.
Operation	None Required.
Safety and Security (Section 4.14 of this FEIS/FEIR)	
Construction	**MM-SS-1**: Alternate walkways for pedestrians shall be provided around construction staging sites in accordance with ADA requirements.

Affected Resource	Mitigation Measures
	MM-SS-2: Safe and convenient pedestrian routes to local schools shall be maintained during construction. **MM-SS-3**: Ongoing communication with school administrators shall be maintained to ensure sufficient notice of construction activities that could affect pedestrian routes to schools is provided. **MM-SS-4**: All pedestrian and bicyclist detour locations around staging sites shall be signed and marked in accordance with the Manual on Uniform Traffic Control Devices "work zone" guidance, and other applicable local and state requirements. **MM-SS-5**: Appropriate traffic controls (signs and signals) shall be installed and maintained to ensure pedestrian and vehicular safety. **MM-SS-6**: To the extent feasible, construction haul trucks shall not use haul routes that pass any school, except when the school is not in session. **MM-SS-7**: Staging or parking of construction-related vehicles, including worker-transport vehicles, shall not occur on or adjacent to a school property when school is in session. **MM-SS-8:** Crossing guards or flaggers shall be provided at affected school crossings when the safety of children may be compromised by construction-related activities. **MM-SS-9:** Barriers or fencing shall be installed to secure construction equipment and to minimize trespassing, vandalism, short-cut attractions, and attractive nuisances. **MM-SS-10:** Security patrols shall be provided to minimize trespassing, vandalism, and short-cut attractions where construction activities occur in the vicinity of local schools. **MM-SS-11**: Project plans, work plans, and traffic control measures shall be coordinated with emergency responders during preliminary engineering, final design, and construction to limit effects to emergency response times.
Operation	**MM-SS-12**: All stations shall be illuminated to avoid shadows and all pedestrian pathways leading to/from sidewalks and parking facilities shall be well illuminated. In addition, lighting would provide excellent visibility for train operators to be able to react to possible conflicts, especially to pedestrians crossing the track. **MM-SS-13:** Proposed station designs shall not include design elements that obstruct visibility or observation nor provide discrete locations favorable to crime; pedestrian access to at-grade stations shall be at ground-level with clear sight lines. **MM-SS-14:** The following measures shall be implemented to reduce pedestrian circulation impacts and hazards: • Sidewalk widths shall be designed with the widest dimensions feasible in conformance with the Los Angeles/Metro's adopted "Land Use/Transportation Policy." • Minimum widths shall not be less than those allowed by the State of California Title 24 access requirements, or the ADA design recommendations. Section 1113A of Title 24 states that walks and sidewalks shall be a minimum of 48 inches (1,219 mm) in width, except that walks serving dwelling units in covered multi-family dwelling buildings may be reduced to 36 inches (914 mm) in clear width except at doors. • Accommodating pedestrian movements and flows shall take priority over other transportation improvements, including automobile access. • Physical improvements shall ensure that all stations are fully accessible as defined in the ADA. **MM-SS-15**: Wide crosswalks shall be provided in areas immediately around proposed stations to facilitate pedestrian mobility. **MM-SS-16**: Metro shall coordinate and consult with the LAFD, LAPD, LASD, and the City San Fernando Police Department to develop safety and security plans for the proposed alignment, parking facilities, and station areas. **MM-SS-17**: Fire separations shall be provided and maintained in public occupancy areas. Station public occupancy shall be separated from station ancillary occupancy by a minimum 2-hour fire-rated wall. The only exception is that a maximum of two station agents, supervisors, or information booths may be located within station public occupancy areas.

Affected Resource	Mitigation Measures
	MM-SS-18: For portions of the alignment where pedestrians and/or motor vehicles must cross the tracks, Metro shall prepare grade crossing applications in coordination with the CPUC and local public agencies, such as LADOT, City of Los Angeles Bureau of Engineering, and the City and County of Los Angeles Fire Departments. Crossings shall require approval from the CPUC and shall meet applicable CPUC standards for grade crossings. **MM-SS-19**: All proposed LRT stations and related parking facilities shall be equipped with monitoring equipment, which would primarily consist of video surveillance equipment to monitor strategic areas of the LRT stations and walkways, and/or be monitored by Metro security personnel on a regular basis. **MM-SS-20**: Metro shall implement a security plan for LRT operations. The plan shall include both in-car and station surveillance by Metro security or other local jurisdiction security personnel. **MM-SS-21**: Metro is continuing to investigate light rail vehicle modifications to increase light rail vehicle safety and minimize or prevent train and pedestrian conflicts. Metro's design criteria also identify multiple efforts to increase light rail vehicle safety and minimize or prevent the potential for pedestrians and vehicle conflicts. Measures identified shall be included during the final design of the LPA. **MM-SS-22**: To reduce potential risk of collisions between LRTs and automobiles on the street portion of the LPA, Metro shall coordinate with the CPUC, City and County of Los Angeles traffic control departments, City of Los Angeles Bureau of Engineering, and the City and County of Los Angeles Fire Departments, and also comply with the Federal Highway Administration's Manual on Uniform Traffic Control Devices for signing and pavement marking treatments. **MM-SS-23**: The diverse needs of different types of traveling public including senior citizens, disabled citizens, low-income citizens, shall be addressed through a formal educational and outreach campaign. The campaign shall target these diverse community members to educate them on proper system use and benefits of LRT ridership. Also see mitigation measure **MM-TRA-7** for measures to reduce the impact due to removal of the existing bike lanes on Van Nuys Boulevard.
Parklands and Community Facilities (Section 4.15 of this FEIS/FEIR)	
Construction	**MM-TRA-1**, **MM-TRA-2**, **MM-VIS-1**, **MM-AQ-1** through **MM-AQ-8**, **MM-NOI-2a and 2b, MM-NOI-3a** through **3c**, **MM-SS-2, MM-SS-4, and MM-SS-5**
Operation	None required.
Historic, Archaeological, and Paleontological Resources	
Historic Resources - Construction	None required.
Historic Resources – Operation	None required.
Archaeological Resources – Construction	**MM-AR-1:** Ground disturbing activities within site areas 19-001124 and 19-002681 and within a 50-foot buffer area around the sites shall be monitored by an Archaeological and Native American monitor. Construction related ground disturbance includes grading, excavation, trenching, and drilling. An Archaeological monitor and a Native American monitor shall examine all sediments disturbed during earth moving activities, including geotechnical drilling and environmental borings, if being conducted, prior to construction. Archaeological monitoring for site CA-LAN-2681 shall be conducted as discussed in the project's Cultural Resources Monitoring Plan (CRMP). All archeological monitoring and any necessary identification, testing, and evaluation of resources identified during monitoring shall be conducted per the methods and procedures described in the CRMP for the project. Standard methods of excavation such as grading and trenching shall be monitored by observation of the excavations as they occur.

Affected Resource	Mitigation Measures
	Drilling of project features such as the overhead contact system (OCS) results in earthen materials being delivered to the ground surface as loosened spoils. Materials to be examined by the Archaeological and Native American monitors are spoils removed from the drill holes while the drilling occurs. The monitors must be provided a safe location and opportunity to view spoils as they are being stored prior to being hauled away from the work area. Access of the monitors to the spoils material may be limited by safety concerns or by hazardous materials contamination. If requested by an Archaeological or Native American monitor, opportunities shall be provided for the monitor, as part of their daily shift activities, to screen or rake spoils to determine if the spoils contain cultural materials. Archaeological monitors are empowered to briefly halt construction if a discovery is made during standard excavation, such as grading and trenching, in the area of that discovery and a 50-foot buffer zone. If a Native American monitor wishes to halt construction, the monitor shall consult with the Archaeological monitor, who may then briefly halt construction. A request to halt activities by the Archaeological monitor should have no effect on ground disturbing activities outside the 50-foot buffer zone; however, spoil piles may not be removed until the monitor can examine them. If an Archaeological or Native American monitor observes an isolated find, the Archaeological monitor shall temporarily halt construction in order to document the find. Documentation shall be completed by collecting a GPS point, photography, and recording information onto the daily monitoring log. All isolated prehistoric artifacts shall be collected. Diagnostic historic-era items shall be collected. Once an isolated item is documented, construction may resume. **MM-AR-2:** If buried cultural materials are encountered in areas not actively being monitored during construction, the Contractor Project Foreman shall halt construction in a 50-foot radius around the discovery and shall immediately contact the Metro Project Manager, Metro Environmental Specialist, and Project Archaeologist. Per the CRMP prepared for the proposed project, for any discovery of an archaeological feature, regardless of eligibility, the Metro Environmental Specialist shall notify all consulting parties identified for the project within 48 hours of any discovery. Notifications shall not be made for ubiquitous infrastructure elements such as modern utilities (cistern, electric, gas, sewer, and water supply lines), transportation infrastructure (bridge piers, buried roadways, and rail segments), sidewalks, and concrete rubble, fill, or waste. **MM-AR-3:** In the event that human remains are encountered during construction, potentially destructive activities in the vicinity of the discovery shall be stopped and the provisions of California PRC § 5097.98 and HSC § 7050.5 shall be followed. The Archaeological monitor shall halt construction, establish a 50-foot buffer around the discovery, and shall contact the Metro Project Manager, Metro Environmental Specialist, and Project Archaeologist. The Metro Environmental Specialist shall notify the County Coroner and FTA on the same day as the discovery. FTA shall notify SHPO, Advisory Council on Historic Preservation (ACHP), and other consulting parties within 48 hours of discovery. Treatment of the remains and all subsequent actions shall be completed per the PA and Cultural Resources Treatment and Monitoring Plan (CRTMP).
Archaeological Resources – Operation	None required.
Paleontological Resources – Construction	**MM-PR-1:** Metro shall retain the services of a qualified paleontologist (minimum of graduate degree, 10 years of experience as a principal investigator, and specialty in vertebrate paleontology) to oversee execution of this mitigation measure. Metro's qualified principal paleontologist shall then develop a Paleontological Resources Monitoring and Mitigation Plan (PRMMP) acceptable to the collections manager of the Vertebrate Paleontology Section of the Natural History Museum of Los Angeles County. Metro will implement the PRMMP during construction. The PRMMP will clearly demarcate the areas to be monitored and specify criteria. At the completion of paleontological monitoring for the proposed project, a paleontological resources monitoring report will be prepared and submitted to the Natural History Museum of Los Angeles County to document the results of the monitoring activities and summarize the results of any paleontological resources encountered.

Affected Resource	Mitigation Measures
	The PRMMP shall include specifications for processing, stabilizing, identifying, and cataloging any fossils recovered as part of the proposed project. Metro's qualified principal paleontologist shall prepare a report detailing the paleontological resources recovered, their significance, and arrangements made for their curation at the conclusion of the monitoring effort. **MM-PR-2:** Prior to the start of construction a qualified Principal Paleontologist shall prepare a Paleontological Mitigation Plan (PMP) that includes the following requirements: • All project personnel involved in ground-disturbing activities shall receive paleontological resources awareness training before beginning work. • Excavations, excluding drilling, deeper than 8 feet below the current surface in the Quaternary alluvium shall be periodically spot checked to determine when older sediments conducive to fossil preservation are encountered. Once the paleontologically sensitive older alluvium is reached, a qualified paleontologist shall perform full-time monitoring of construction. Should sediments in a particular area be determined by the paleontologist to be unsuitable for fossil preservation, monitoring shall be suspended in those areas. A paleontologist shall be available to be on call to respond to any unanticipated discoveries and may adjust monitoring based on the construction plans and field visits. • Sediment samples from the Quaternary older alluvium shall be collected and screened for microfossils. • Recovered specimens shall be stabilized and prepared to the point of identification. Specimens shall be identified to the lowest taxonomic level possible and transferred to an accredited repository for curation along with all associated field and lab data. • Upon completion of project excavation, a Paleontological Mitigation Report (PMR) documenting compliance shall be prepared and submitted to the Lead Agency under CEQA.
Paleontological Resources – Operation	None required.
Environmental Justice (Section 4.17 of this FEIS/FEIR)	
Construction	**MM-TRA-1, MM-TRA-2, MM-TRA-3, MM-VIS-1–5, MM-AQ-1–9, MM-NOI-1A–1D, MM-NOI-2A–2B, MM-NOI-3A through 3C,** and **MM-SS 1–23.**
Operation	**MM-CN-1**
Growth Inducing Impacts (Section 4.18 of this FEIS/FEIR)	
Induce substantial population growth in an area either directly or indirectly	None required.
Irreversible and Irretrievable Commitments of Resources	
Construction and Operation	No mitigation measures are required

ATTACHMENT B

EAST SAN FERNANDO VALLEY TRANSIT CORRIDOR PROJECT

FINDINGS OF FACT AND STATEMENT OF OVERRIDING CONSIDERATIONS

PREPARED FOR:

Los Angeles County Metropolitan Transportation Authority

Metro

OCTOBER 2020

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1 Introduction

This document presents the findings required by the California Environmental Quality Act (CEQA) for each of the significant environmental effects identified in the Final Environmental Impact Statement/ Final Environmental Impact Report (FEIS/FEIR) (SCH No. 2013021064) that was prepared for the proposed East San Fernando Valley Transit Corridor Project (proposed project) and includes a Statement of Overriding Considerations, pursuant to CEQA, which states the reasons why the benefits of the project outweigh the project's unavoidable significant adverse effects. This document also describes the alternatives to the proposed project considered in the FEIS/FEIR, discusses whether the alternatives would avoid or minimize the significant impacts of the proposed project, identifies the environmentally superior alternative, and explains why the alternatives were rejected in favor of the proposed project.

1.1 Purpose of Findings and the Statement of Overriding Considerations

Section 21081 of the California Public Resources Code and Section 15091 of the CEQA Guidelines require a public agency, prior to approving a project, to identify significant impacts of the project and make one or more written findings for each such impact. According to Section 21081, "no public agency shall approve or carry out a project for which an environmental impact report has been certified which identifies one or more significant effects on the environment that would occur if the project is approved or carried out unless both of the following occur:

(a) The public agency makes one or more of the following possible findings with respect to each significant effect:

    1. Changes or alterations have been required in, or incorporated into, the project to mitigate or avoid the significant effects on the environment.

    2. Those changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency.

    3. Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the environmental impact report.

(b) With respect to significant effects which were subject to a finding under paragraph (3) of subdivision (a), the public agency finds that specific overriding economic, legal, social, technological, or other benefits of the project outweigh the significant effects on the environment."

Section 21081.6 of CEQA also requires public agencies to adopt a monitoring and reporting program for assessing and ensuring the implementation of proposed mitigation measures. The mitigation measures identified in the Mitigation Monitoring and Reporting Program (MMRP) for the proposed project, which is provided under separate cover, are those identified within this Findings and the Statement of Overriding Considerations. Pursuant to Section 21081.6, public agencies are required to provide that measures to mitigate or avoid significant effects on the environment are fully enforceable through permit conditions, agreements, or other measures.

The Statement of Overriding Considerations is a written statement explaining the specific reasons why the social, economic, legal, technical or other beneficial aspects of the proposed project outweigh the unavoidable adverse environmental impacts and why the Lead Agency is willing to accept such impacts. This statement shall be based on the FEIR and/or other substantial evidence in the record.

1.2 Document Organization

This Findings and the Statement of Overriding Considerations are organized as follows:

- Section 1.0, Introduction, provides background information of the purpose of Findings and the Statement of Overriding Considerations, presents the organization of this document, and provides a brief overview of the proposed project.
- Section 2.0, Statement of Environmental Effects and Required Findings, identifies the issue areas for which the proposed project would have no impact or a less than significant impact, and presents a summary of the significant effects of the proposed project along with the one or more written findings made by the public agency explaining how it dealt with each of the significant effects and mitigation measures.
- Section 3.0, Alternatives Considered, describes the alternatives evaluated in the EIR, and the findings and rationale for selection of the proposed project.
- Section 4.0, Statement of Overriding Considerations, explains in detail why the social, economic, legal, technical or other beneficial aspects of the proposed project outweigh the unavoidable, adverse environmental impacts and why the agency is willing to accept such impacts.

1.3 Overview of the Proposed Project

The East San Fernando Valley Transit Corridor Project would provide new service and infrastructure that would improve passenger mobility and connectivity to regional activity centers, increase transit service efficiency (speeds and passenger throughput), and make transit service more environmentally beneficial via reductions in greenhouse gas emissions.

Metro applied the objectives below in evaluating potential alternatives, including bus rapid transit (BRT) and light rail transit (LRT) alternatives, for the East San Fernando Valley Transit Corridor Project. These objectives reflect Metro's mission to meet public transportation and mobility needs

for transit infrastructure while also being a responsible steward of the environment and considerate of affected agencies and community members when planning a fiscally sound project.

- Provide new service and/or infrastructure that improves passenger mobility and connectivity to regional activity centers;
- Increase transit service efficiency (speeds and passenger throughput) in the project study area; and
- Make transit service more environmentally beneficial by providing alternatives to auto travel and other environmental benefits, such as reduced air pollutants, including reductions in greenhouse gas emissions in the project study area.

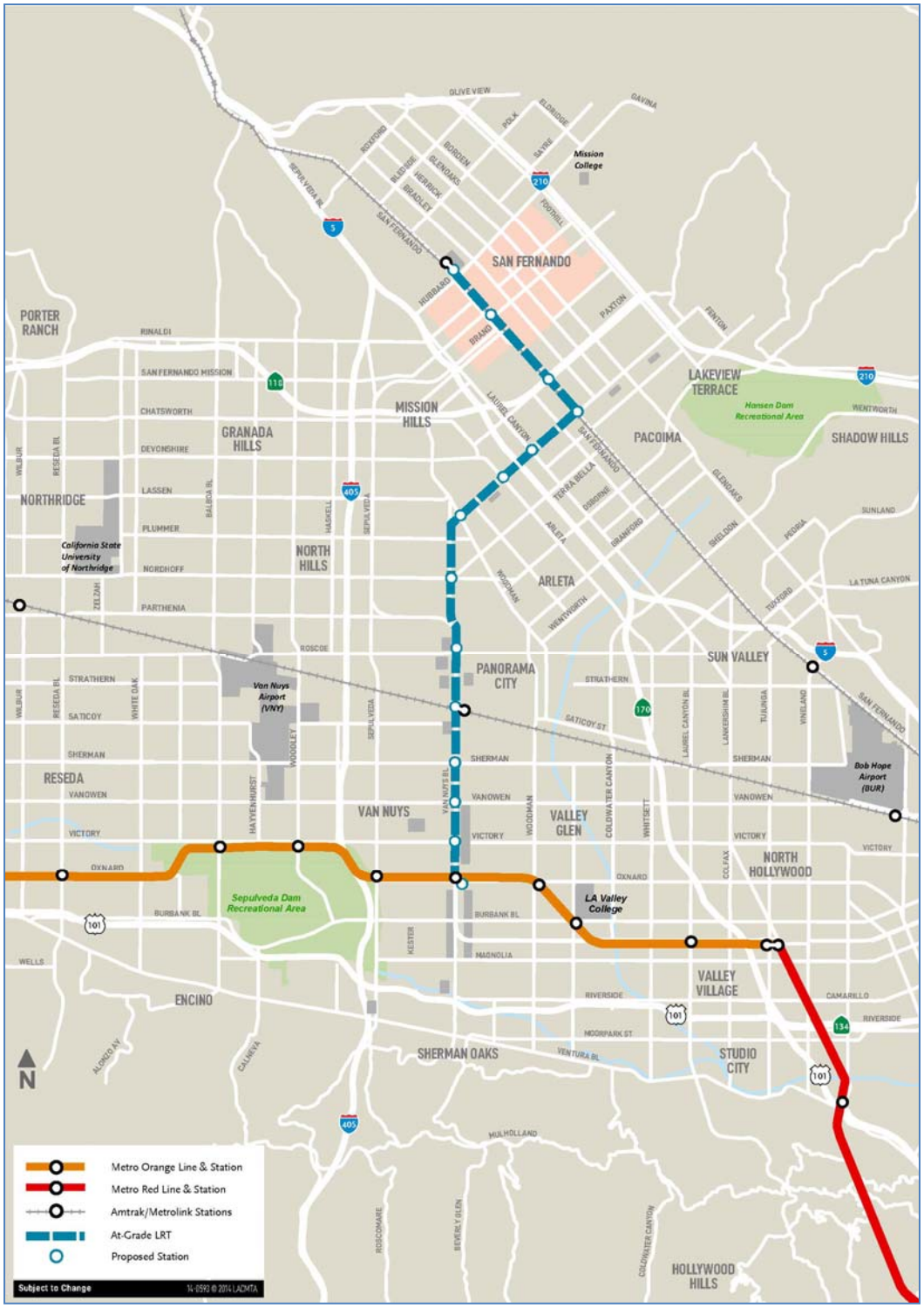
On June 28, 2018 the Metro Board of Directors formally identified a modified version of Alternative 4 (identified as "Alternative 4 Modified: At-Grade LRT" in the FEIS/FEIR) as the Locally Preferred Alternative (LPA). Factors that were considered by Metro in identifying Alternative 4 Modified: At-Grade LRT as the LPA include: the greater capacity of LRT compared to the Bus Rapid Transit alternatives, the reduced construction time and cost compared to the Draft EIS/EIR Alternative 4, fewer construction impacts compared to Draft EIS/EIR Alternative 4, and strong community support for a LRT. Additionally, Metro determined the LPA best fulfilled the project's purpose and need to:

- Improve north-south mobility;
- Provide more reliable operations and connections between key transit hubs/routes;
- Enhance transit accessibility/connectivity to local and regional destinations;
- Provide additional transit options in a largely transit-dependent area; and
- Encourage mode shift to transit.

The LPA consists of a 9.2-mile median running at- grade LRT with 14 stations. Under the LPA, the LRT would be powered by electrified overhead lines and would have two tracks fully separated from automobile traffic, except at signalized intersections or controlled at-grade crossings. The LPA 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, along and just east of San Fernando Road. Metrolink and the Union Pacific Railroad would continue to use a separate dedicated track. As the LPA approaches Van Nuys Boulevard it would transition to and operate in a semi-exclusive right-of-way in what is currently the median of Van Nuys Boulevard, for approximately 6.7 miles south to the Van Nuys Metro Orange Line Station. Stations would be constructed at approximately 3/4 -mile intervals along the entire route. The 9.2-mile route of the LPA is illustrated in Figure 1. For additional information on the LPA, please see Chapter 2 of the FEIS/FEIR.

LRT vehicles would be similar to those currently used throughout the existing Metro LRT system. Metro's LRT system is designed to accommodate trains with up to three, 90-foot rail cars, for a total train length of 270 feet. Although LRT vehicles can operate at speeds of up to 65 mph in an exclusive at-grade guideway along Van Nuys Boulevard, they would not exceed the posted speed limit of the adjacent roadway, which is 35 mph. The LPA assumes a maximum speed of 65 mph when traveling within the Metro right-of-way adjacent to San Fernando Road. LRT vehicles could carry

Figure 1: LPA Alignment



Source: KOA, 2019.

approximately 230 seated passengers and up to 400 passengers when standing passengers on a three-car train are included. The LRT train sets would be configured with a driver's cab at either end, similar to other Metro light rail trains, allowing them to run in either direction without the need to turn around at the termini.

For the LPA, the proposed stations would have designs consistent with the Metro Rail Design Criteria (MRDC), including directive and standard drawings. Stations would be ADA compliant, including compliance with the requirements pertaining to rail platforms, rail station signs, public address systems, clocks, escalators, and track crossings.

Common elements would include signage, maps, fixtures, furnishings, lighting, and communications equipment. All stations would have center or side platforms, allowing passengers to access trains traveling in either direction. Typically, at-grade station platforms are 270 feet long (to accommodate three-car trains), 39 inches high (to allow level boarding and full accessibility, in compliance with the ADA), and a minimum of 12.2 feet wide for side platforms to 16 feet wide for center platform stations.

Canopies at the LRT stations would be approximately 13 feet high and would incorporate directional station lighting to enhance safety. LPA stations would include seating elements and contain ticket vending machines, variable message signs, route maps, and fare gates, as well as the name and location of the LRT station. In addition, Metro is moving to a fare gate system and such a system would be integrated into station design as appropriate.

Stations would also include bicycle parking and bike lockers at or near stations, as feasible. In addition, signage and safety and security equipment, such as closed-circuit televisions, public announcement systems, passenger assistance telephones, and variable message signs (providing real-time information), would be part of the amenities.

The LPA would require a number of additional elements to support vehicle operations, including an overhead catenary system (OCS) along the entire alignment, traction power substation (TPSS) units, communications and signaling buildings, and a maintenance and storage facility (MSF).

The MSF would provide secure storage of the LRT vehicles when they are not in operation, and regular light maintenance to keep them clean and in good operating condition as well as heavy maintenance. The MSF would accommodate both operational and administrative functions. The MSF would accommodate all levels of vehicle service and maintenance (i.e., progressive maintenance, scheduled maintenance, unscheduled repairs, warrantee service, and limited heavy maintenance) in addition to storage space for vehicles. The typical MSF would provide: interior and exterior vehicle cleaning, sanding, and inspection areas; maintenance and repair shops; storage yards for vehicles; and storage areas for materials, tools, and spare vehicle parts. The MSF would be the point of origin and termination for daily service.

MSF Option B, has been identified as the locally preferred site by the Metro Board. The MSF site would be approximately 25 acres in size. The MSF Option B site is located on the west side of Van Nuys Boulevard and is bounded by Keswick Street on the south, Raymer Street on the east and north, and the Pacoima Wash on the west. Access to the facility would be via two turnout tracks on

the west side of the alignment. A northbound turnout would be located in the vicinity of Saticoy Street. A southbound turnout would be located in the vicinity of Keswick Street.

The LPA is anticipated to operate with a 6-minute peak and 12-minute off-peak headways when it opens and is projected to operate at 5-minute peak and 10-minute off-peak once ridership begins to increase.

With implementation of the LPA, all curbside parking would be prohibited along Van Nuys Boulevard.

The number of travel lanes on Van Nuys Boulevard would be reduced from three to two lanes in each direction for the segment between the Metro Orange Line and Parthenia Street. North of that point, the LPA would maintain the two existing travel lanes in each direction to Laurel Canyon Boulevard and the existing one northbound lane and two southbound lanes along Van Nuys Boulevard from Laurel Canyon Boulevard to San Fernando Road.[1]

Left turns from Van Nuys Boulevard onto cross streets would be maintained at most of the currently signalized intersections where the LRT would be running in the median. However, all vehicle movements across the median at currently unsignalized intersections would be prohibited. This would include left turns from Van Nuys Boulevard as well as left turns and through traffic from un-signalized side streets and private driveways. Motorists who desire to make a left turn onto an unsignalized cross street or into a driveway would have to make a U-turn at a signalized left-turn location or choose a route that would allow them to use a signalized cross street.

Left turns into and out of driveways would be blocked by the LRT dedicated guideway under the LPA. Only right turns into and out of minor cross streets and driveways would be allowed.

For the portion of the LPA alignment within the Metro-owned railroad right-of-way, the grade crossings at Paxton Street, Wolfskill Street, Brand Boulevard, Maclay Avenue, and Hubbard Avenue would be controlled by traditional vehicular crossing gates. The current single-track crossings would become three.

There would also be left-turn lane gates at signalized intersections along Van Nuys Boulevard where left turns are permitted across the LRT dedicated guideway. The gates would be activated whenever a train approaches the intersection to enhance safety at these locations.

There would be a pedestrian overcrossing or undercrossing at the Sylmar/San Fernando Metrolink Station from the LRT platform to the Metrolink platform.

All current crosswalks at signal-controlled intersections would be maintained. Between the signalized intersections, a barrier would be installed to prevent mid-block pedestrian crossings, as is Metro's current practice on its median-running LRT lines. Pedestrians would be required to walk to a signalized location to cross Van Nuys Boulevard. LRT passengers would reach the median station platforms from crosswalks at signalized intersections.

[1] In 2017, the City reconfigured Van Nuys Boulevard north of Laurel Canyon Boulevard to San Fernando Road to include a protected bike lane with two lanes in the south direction and one lane in the north direction.

Bicycle parking would be provided at or near Metro stations, as feasible. The existing bike lanes, which extend approximately two miles north along Nuys Boulevard from Parthenia Street to Beachy Avenue and from Laurel Canyon Boulevard to San Fernando Road, would be removed due to right-of-way constraints.

The City of Los Angeles constructed a bicycle path within Metro's railroad right-of-way parallel to San Fernando Road. This existing Class I bike path would remain in place except in the City of San Fernando where the bike path would be relocated east in order to accommodate the relocated single Metrolink/UPRR track. The right-of-way is generally sufficiently wide enough to allow the bicycle path to remain alongside a pair of LRT tracks and a relocated track for Metrolink and the Union Pacific Railroad though some partial takes of adjacent properties would be required in the City of San Fernando. At the point where the LPA crosses the bicycle path, near the intersection of Pinney Street and San Fernando Road, a signalized grade crossing would be provided.

1.3.1 Project Phasing and an Initial Operating Segment

In order to ensure the objectives of the project are met in a timely manner and avoid delays due to the timing of funding availability, Metro is considering constructing the LPA in two phases. An Initial Operating Segment (IOS) was included in the FEIS/FEIR to enable Metro to realize potential cost savings from phasing the project and beginning work earlier on an initial segment. It should be noted that Metro is proceeding with IOS's on other projects for that reason and to specifically provide the decision-making body of Metro (the Metro Board) with flexibility in determining the most efficient and cost effective manner to implement those projects. Proceeding with an IOS for the proposed project will also allow further coordination to occur with the Public Utilities Commission (PUC) and Metrolink that will be necessary to accommodate double tracking of the Antelope Valley Line and with the City of San Fernando regarding traffic impacts at intersections in the City prior to development of the remaining northern segment of the LPA.

The first phase, or IOS, would run along the same alignment and have the same LRT design features, MSF, and operating and service characteristics as those described for the LPA; however, the IOS would only extend as far north as San Fernando Road and the proposed Van Nuys/San Fernando Station, rather than continuing 2.5 miles within the existing railroad right-of-way to the Sylmar/San Fernando Metrolink station, as would occur under the LPA. Therefore, it would have a smaller project footprint than the LPA and would include 11 stations and 11 TPSS units instead of the 14 stations and 14 TPSS units proposed under the LPA. It remains Metro's intent, however, to build the remaining northern 2.5 miles of the LPA located within the existing railroad right-of-way from the Van Nuys/San Fernando station to the Sylmar/San Fernando Metrolink station

A schedule for completing the second phase, i.e., the northern 2.5 miles, would be developed upon securing the necessary funding, resolution of ongoing discussions with the City of San Fernando regarding traffic impact issues, and obtaining necessary approvals from the Public Utilities Commission.

2 Statement of Significant Environmental Impacts and Required Findings

This section discusses the significant impacts and mitigation measures identified for the proposed project and makes findings for all significant impacts identified in the FEIS/FEIR for the LPA.

The FEIS/FEIR focused on those potential effects of the LPA on the environment that the Los Angeles County Transportation Authority (Metro), as the CEQA Lead Agency and project proponent, has determined may be significant in accordance with CEQA regulations. As described in Chapters 3 and 4 of the EIR, the proposed project could result in significant environmental impacts in the following issue areas, prior to mitigation:

- Transportation, Transit, Circulation, and Parking
- Land Use
- Visual Quality and Aesthetics
- Air Quality
- Noise and Vibration
- Geology, Soils, and Seismicity
- Hazardous Waste and Materials
- Ecosystems and Biological Resources
- Safety and Security
- Parklands and Community Facilities
- Historic, Archaeological, and Paleontological Resources

Each of the resource areas analyzed in the FEIS/FEIR is discussed in terms of:

- *Description of Significant Impacts* are specific descriptions of the environmental effects identified in the FEIS/FEIR as significant or potentially significant.
- *Mitigation Measures* are the proposed mitigation measures for the impacts identified as significant or potentially significant.
- *Findings* are the findings made in accordance with Section 21081 of CEQA. One of the three possible findings is made for each significant or potentially significant impact, as provided in Section 15091 of the CEQA Guidelines. The significance of the environmental impacts after mitigation is also provided.
- *Rationale* is a summary of the reasons for the findings.
- *References* are notations on the specific section in the EIR or other information source that support the findings.

2.1 Transportation, Transit, Circulation, and Parking

2.1.1 Description of Significant Impacts

Construction

Construction would occur over a period of approximately 4.5 to 5 years. The construction activity would likely be divided into separate work zones with varying levels of construction. The construction contractor would develop detour routes to facilitate traffic movement through construction zones without significantly increasing cut-through traffic in adjacent residential areas. Additionally, where feasible, the construction contractor would temporarily restripe roadways including restriping turn lanes, through lanes, and parking lanes at the affected intersections to maximize the vehicular capacity at those locations affected by construction closures. A majority of construction-related travel (i.e., deliveries, hauling, and worker trips) would be scheduled during the off-peak hours.

At the start of construction within each work area, on-street parking areas would be removed for project-related construction activities and to accommodate the LRT alignment. This removal of parking would be permanent. Temporary street and lane closures may be necessary. The extent and duration of the closures would depend on a number of factors, including the construction contract limits and individual contractor's choices, and would be coordinated with the Cities of Los Angeles and San Fernando, as necessary. Restrictions on the extent and duration of the closures will be incorporated in the project construction specifications. In some cases, short-term full closures might be substituted for extended partial closures to reduce overall impacts. Community outreach to keep the public and businesses advised as to closures would be provided. Signage and access to businesses would also be provided. Additionally, traffic control officers should be placed at major intersections during peak hours to minimize delays related to construction activities.

Transit

Construction could take up to five years. The impacts on transit would be significant under CEQA due to the estimated duration and magnitude of construction activities required to relocate utilities, remove the existing roadbed, install the LRT system trackage, signals, power infrastructure, and install stations and related infrastructure.

Traffic

The construction traffic impacts would be significant under CEQA as a consequence of the estimated duration and magnitude of construction, which would include lane and street closures.

Pedestrian and Bicycle Facilities

Construction would require the permanent removal of bicycle facilities located within the work zones. This would be a significant impact under CEQA.

Operational

Traffic

Under the Existing-with-Project Scenario, the LPA would result in significant traffic impacts to the level of service (LOS)[2] at 16 of the 73 study intersections along the project corridor due to the reduction in the number of travel lanes and additional turn restrictions.

With implementation of the LPA, the shifts in traffic to the parallel corridors (Sepulveda and Woodman) would result in significant traffic impacts at 13 of the 51 study intersections along the parallel corridors under the Existing-with-Project scenario.

Under the Future-with-Project Scenario (Year 2040), the LPA would result insignificant traffic impacts at 20 of the 73 study intersections along the project corridor.

With the implementation of the LPA, the shifts in traffic to the Sepulveda and Woodman parallel corridors would result in significant traffic impacts at eight of the 51 study intersections under the Future-with-Project Scenario.

Pedestrian and Bicycle Facilities

Implementation of the LPA would affect existing and planned pedestrian and bicycle facilities. Project implementation would conflict with the City of Los Angeles Bicycle Plan, as designated bicycle lanes on Van Nuys Boulevard would not be feasible under the LPA. This would be a significant impact under CEQA. However, it should be noted that the City of Los Angeles General Plan Framework Element designates the corridor as a Transit Priority Segment, which conflicts with City of Los Angeles Bicycle Plan.

Cumulative

Cumulative Impacts during Construction

Construction

Under existing conditions, three of 73 study intersections operate at an unacceptable LOS of E or F. Future growth and development in the region would generate additional traffic on streets in the project corridor, which would adversely affect traffic flow and bus transit service. Although the lane or street closures required to construct the LPA would be temporary, they could, nonetheless, contribute to short-term increases in congestion for motorists and result in additional delays for bus vehicles, a potentially significant cumulative impact.

[2] On July 30, 2019, the City of Los Angeles adopted vehicle miles traveled (VMT) as a criterion in determining transportation impacts under CEQA. This adoption was required by SB 743 and the recent changes to Section 15064.3 of the State CEQA Guidelines. Adoption by the City Council began a transition period during which projects that already have a signed memorandum of understanding (MOU) with LADOT and have filed an application with the Department of City Planning may continue analyzing transportation impacts with LOS, as long as the project will be adopted and through any appeal period prior to the State deadline of July 1, 2020. The DEIS/DEIR and the FEIS/FEIR included analyses of the proposed project's LOS and VMT impacts. Although the LPA identified in the FEIS/FEIR would result in significant intersection impacts based on LOS thresholds, it would result in a beneficial effect by reducing VMT.

Construction of the LPA would require the permanent removal of existing bicycle facilities on Van Nuys Boulevard within Los Angeles and would conflict with planned bikeways along the length of Van Nuys Boulevard identified in the City's Bicycle Plan. Therefore, the LPA would result in a cumulatively considerable contribution to a significant cumulative project effect on bicycle facilities.

Operational

Under existing conditions, three of 73 study intersections would operate at an unacceptable level-of-service (LOS) of E or F. Because of future growth and development and the resulting increases in traffic, under future baseline (2040) conditions, 16 of the 73 study intersections would operate at unacceptable LOS of E or F, a cumulatively significant impact. The LPA would convert two mixed-flow lanes to a dedicated LRT guideway, resulting in a reduction in roadway capacity for mixed-flow traffic. As a consequence, in 2040, 19 study intersections would operate at LOS of E or F, an increase of four intersections compared to the future baseline conditions. The LPA would result in a cumulatively considerable contribution to significant cumulative traffic impacts. However, it should be noted that based on the analysis of vehicle miles travelled (VMT) and other transportation performance metrics in the FEIS/FEIR, the LPA would have a beneficial impact on VMT and regional mobility.

2.1.2 Mitigation Measures

Construction

Transit

MM-TRA-1: The Traffic Management Plan shall require Metro to communicate closures and information on any changes to bus service to local transit agencies in advance and develop detours as appropriate. Bus stops within work areas shall be relocated, with warning signs posted in advance of the closure, and warnings and alternate stop notifications posted during the extent of the closure.

Traffic

MM-TRA-2: The Traffic Management Plan shall include the following typical measures, and others as appropriate:

- Schedule a majority of construction-related travel (i.e., deliveries, hauling, and worker trips) during the off-peak hours.
- Develop detour routes to facilitate traffic movement through construction zones without significantly increasing cut-through traffic in adjacent residential areas.
- Where feasible, temporarily restripe roadways including turning lanes, through lanes, and parking lanes at the affected intersections to maximize the vehicular capacity at those locations affected by construction closures.
- Where feasible, temporarily remove on-street parking to maximize the vehicular capacity at those locations affected by construction closures. In these areas where street parking is temporarily removed in front of businesses, the contractor shall provide wayfinding to other

nearby parking lots or temporary lots, with any temporary parking secured well in advance of parking being removed in the affected area.

- Place station traffic control officers at major intersections during peak hours to minimize delays related to construction activities.
- Assign a Construction Relations team inclusive of a manager, senior officers, and social media strategist to develop and implement the Metro Board's adopted Construction Relations model. The team will conduct the outreach program to inform the general public about the construction process, planned roadway closures, and anticipated mitigations through community briefings in public meeting spaces and use of signage (banners, etc.).
- Develop and implement a program with business owners to minimize effects to businesses during construction activities, including but not limited to signage, Eat, Shop, Play, and promotional programs.
- Consult and seek input on the designation and identification of haul routes and hours of operation for trucks with the local jurisdictions, school districts, and Caltrans. The selected routes should minimize noise, vibration, and other effects.
- To the extent practical, maintain traffic lanes in both directions, particularly during the morning and afternoon peak hours.
- Maintain access to adjacent businesses and schools (including passenger loading areas for parents dropping off students) via existing or temporary driveways or loading zones throughout the construction period.
- Coordinate potential road closures and detour routes and other construction activities that could adversely affect vehicle routes in the immediate vicinity of local schools with local school districts.
- Install and maintain appropriate traffic controls (signs and signals) to ensure vehicular safety.

Pedestrian and Bicycle Facilities

MM-TRA-3: To ensure potential impacts on pedestrian and bicycle facilities are minimized to the extent feasible, the Traffic Management Plan and Traffic Control Plan shall include the following:

- Bicycle detour signs shall be provided, as appropriate, to route bicyclists away from detour areas with minimal-width travel lanes and onto parallel roadways.
- Sidewalk closure and pedestrian route detour signs shall be provided, as appropriate, that safely route pedestrians around work areas where sidewalks are closed for safety reasons or for specific construction work within the sidewalk area. In addition, the project contractor shall ensure appropriate "Open during Construction," wayfinding, and promotional signage for businesses affected by sidewalk closures is provided and access to these businesses is maintained.

Operational

Traffic

MM-TRA-4: During the Preliminary Engineering phase of the project, Metro will work with the Cities of Los Angeles and San Fernando to synchronize and coordinate signal timing and to optimize changes in roadway striping to minimize potential operational traffic impacts and hazards to the extent feasible.

Pedestrian and Bicycle Facilities

MM-TRA-5: Additional visual enhancements, such as high-visibility crosswalks that meet current LADOT design standards, to the existing crosswalks at each proposed station location shall be implemented to further improve pedestrian circulation.

MM-TRA-6: To further reduce potential adverse and less-than-significant pedestrian impacts, Metro shall prepare a First/Last Mile study that documents preferred pedestrian access to each station, general pedestrian circulation in the immediate vicinity of the station, and potential sites for connections to nearby bus services. The purpose of this study shall include ensuring sufficient circulation, access, and information important to users of the transit system. The results of the study shall be implemented through coordination between Metro and the local jurisdictions of the City of Los Angeles and the City of San Fernando.

MM-TRA-7: To reduce the potential impacts due to removal of the existing bike lanes extending approximately 2 miles north on Van Nuys Boulevard from Parthenia Street to Beachy Avenue and from Laurel Canyon Boulevard to San Fernando Road, two parallel corridors have been identified for consideration and approval by the Los Angeles Department of Transportation (LADOT) as bike friendly corridors. These include Filmore Street to the west and Pierce Street to the east, which can be developed as Class III Bike Friendly streets by striping sharrows and providing signage. Metro shall also continue to work with LADOT to identify, to the extent feasible, replacement locations for Class II bike lanes that meet the goals and policies in the City of Los Angeles Bicycle Plan.

2.1.3 Findings

For the above impacts to Transportation, the following finding is made:

☒ Changes or alterations have been required in, or incorporated into, the project to avoid or substantially lessen the significant environmental effect as identified in the FEIS/FEIR.

☐ Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency

☒ Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the FEIS/FEIR.

The potential Transportation impacts due to the proposed project are found to be.

☒ Significant ☐ Not Significant

2.1.4 Rationale

Project construction would result in significant construction impacts on transit, traffic, and bicycle facilities, and less-than-significant impacts pedestrian facilities. Project operation would result in significant bicycle facilities and traffic impacts, and less-than-significant impacts on pedestrian facilities after implementation of proposed mitigation measures. Impacts on local transit would be less than significant but beneficial on overall regional transit service.

2.1.5 References

Chapter 3 Transportation, Transit, Circulation and Parking of the FEIS/FEIR describes the project's transportation, transit, circulation and parking impacts and identifies proposed feasible mitigation measures. Also, please note that mitigation measure MM-TRA-2 above incorporates revisions made in response to comment letter AL10 (see Appendix A1 to the FEIS/FEIR) from the Los Angeles Unified School District (see Appendix A2 for the responses to comment letter AL10).

2.2 Land Use

2.2.1 Description of Significant Impacts

Construction

Construction activities along the alignment would result in temporary nuisance impacts (e.g., noise, air quality impacts) on nearby land uses. Construction noise would result from the use of heavy equipment during construction activities, such as excavation, grading, ground clearing, and installing foundations and structures, as well as from trucks hauling materials to and from the construction areas. Air quality impacts would result from the generation of fugitive dust during ground disturbing activities, and from the operation of heavy-duty, diesel-fueled equipment, such as bulldozers, trucks, and scrapers. Additionally, construction staging areas would be established near the project alignment and used for equipment and material storage. The staging areas would be located within the right-of-way, parking lots, or on vacant land and would not require land from adjacent properties. No land acquisitions would be required for construction staging areas. Nonetheless, activities at the construction staging areas, similar to other construction activities along the alignment, would result in nuisance impacts on nearby sensitive land uses (e.g., residential, parks, schools, hospitals). Where temporary construction impacts on nearby land uses are determined to be significant (e.g., noise impacts), the land use incompatibility impacts would also be considered to be significant. Therefore, the construction impacts on nearby sensitive land uses would be potentially significant under CEQA, due to impacts exceeding the applicable CEQA thresholds and would be incompatible with existing land use plans and codes, before mitigation.

Operational

Under the LPA, significant traffic impacts would occur at 20 of 73 study intersections along the corridor. Since the LPA would result in localized traffic impacts, it would not fully achieve the congestion reduction objective specified in the City of Los Angeles General Plan, Transportation Element (Objective 2: To mitigate the impacts of traffic growth, reduce congestion, and improve air quality by implementing a comprehensive program of multimodal strategies that encompass physical and operational improvements as well as demand management). Though the LPA would not reduce congestion, the LPA would not conflict with the remainder of that objective. In addition, the LPA would conflict with an objective and policy in the City of Los Angeles General Plan, Air Quality Element (Objective 3.2. It is the objective of the City of Los Angeles to reduce traffic during peak periods; and Policy 3.2.1. Manage traffic congestion during peak periods). Therefore, the LPA, because of its localized traffic impacts, would conflict with local land use plan policies or objectives to reduce congestion, which would be a significant impact under CEQA.

Under the LPA, the existing Class II bike lanes on Van Nuys Boulevard north of Parthenia Street would be removed to make room for the LRT tracks. These changes would conflict with the City's Bicycle Plan because designated bicycle lanes on Van Nuys Boulevard, which are included as part of the Backbone Bicycle Network, would not be feasible with the implementation of the LPA. Although this conflict would occur, it should be noted that the Van Nuys Boulevard corridor is also designated a Transit Priority Segment within the City of Los Angeles General Plan Framework Element. Also, the City's proposed Mobility Element 2035 of the General Plan states in Section 2.9 that on a street that is designated as a Transit Enhanced Network, but is also intended to receive a bicycle lane, design elements for the transit can take precedence over the provision of a bicycle lane. Additionally, the City's Bicycle Plan includes planned bicycle lanes on Woodman Avenue (one-mile to the east of and parallel to Van Nuys Boulevard) between Ventura Boulevard and the Osborne Street and Nordhoff Street corridors. Bicycle lanes are also planned to connect the Osborne Street corridor to San Fernando Road. In addition, bicycle accommodations would be provided at LRT stations and on LRT trains, where feasible. Therefore, while Class II bicycle lanes along Van Nuys Boulevard would not be possible under the LPA, the ability for bicyclists to access areas in the project corridor would be retained, and the project would achieve other local planning goals of reducing reliance on the automobile and increasing transit ridership.

The LPA could also result in localized noise and vibration impacts due to the LRT vehicles operating on local roadways. Because the alignment would run in proximity to residential and recreation areas, sensitive receptors could be adversely affected by these impacts, which would conflict with an objective in the City of Los Angeles General Plan, Noise Element (Objective 2: Reduce or eliminate nonairport related intrusive noise, especially relative to noise sensitive uses). To the extent that the LPA results in other significant adverse environmental impacts, it would further conflict with any local land use plan goals and policies intended to minimize those environmental impacts. Therefore, given those potential conflicts and those discussed above, the potential impacts under CEQA are considered to be significant.

Cumulative

The LPA would result in localized traffic impacts at 20 of the 73 study intersections along the corridor. Operation of the LRT facilities would also generate additional noise that could result in noise impacts on some nearby sensitive land uses. Past projects have resulted in localized traffic and noise impacts, and other present or reasonably foreseeable future projects in the area could further degrade traffic and noise conditions in the area. Therefore, cumulative impacts from past, present, and reasonably foreseeable future projects are significant. As a result, any adverse land use impacts from the LPA due to traffic and noise impacts would be considered cumulatively considerable. However, because noise impacts resulting from the LPA would be minimized or mitigated through mitigation measures, as identified in sections 4.8, Noise and Vibration, the alternative's contribution to cumulative noise impacts during operation would be reduced to less than cumulatively considerable after implementation of mitigation measures.

2.2.2 Mitigation Measures

Compliance Design Requirements and Design Features

Station areas for the LPA would be designed in accordance with local codes and ordinances.

Construction Mitigation Measures

The reader is referred to the respective air quality and noise mitigation measures in Sections 2.2 and 2.9, respectively of this document.

Operational Mitigation Measures

The reader is referred to the operational noise mitigation measures in Section2.9 of this document.

No feasible mitigation measures have been identified to mitigate the localized traffic impacts that would occur under this alternative, which would conflict with land use plan policies and goals to reduce congestion.

2.2.3 Findings

For the above impacts to Land Use, the following findings are made:

☒ Changes or alterations have been required in, or incorporated into, the project to avoid or substantially lessen the significant environmental effect as identified in the FEIS/FEIR.

☐ Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency

☒ Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the FEIS/FEIR.

The potential Land Use impacts due to the proposed project are found to be.

☒ Significant ☐ Not Significant

2.2.4 Rationale

Proposed mitigation measures would reduce construction impacts to be less than significant under CEQA. The LPA operational impacts, because of its localized traffic impacts, would conflict with local land use plan policies or objectives to reduce congestion and would be significant and unavoidable. The removal of Class II bike lanes would also conflict with local land use plan policies. Although mitigation measure MM-TRA-7 (see above) is proposed. Impacts could still be significant after implementation of this measure. No additional feasible mitigation measures have been identified that would reduce these operational impacts to a less-than-significant level. However, it should also be noted that the LPA would provide regional transportation benefits by improving access to transit, increasing transit ridership, and reducing vehicle miles and hours traveled.

2.2.5 References

Section 4.1 of the EIR describes the LPA's land use impacts. Section 4.8, Noise and Vibration and Section 4.6, Air Quality of the EIR describe the impacts of the LPA on sensitive land uses along the corridor.

2.3 Visual Quality and Aesthetics

2.3.1 Description of Significant Impacts

Construction

Construction of the LPA could result in temporary visual impacts within and surrounding the project corridor due to the use of construction lighting, which could spill over onto adjacent properties and could result in glare that could adversely affect the clarity of nighttime views in the area; the presence of large equipment such as cranes and associated vehicles including bulldozers, backhoes, graders, scrapers, and truck; and the storage of construction materials in staging areas, which could be visible from public streets, sidewalks, and adjacent properties.

Construction activities would also require the removal of vegetation, including street trees (e.g., the landmark rows of palm trees along Van Nuys Boulevard in the Van Nuys Civic Center), which could significantly affect visual character and quality along the project corridor.

Operational

Impacts on scenic vistas, such as views of distant mountains, scenic resources, such as existing trees, vegetation, and historic buildings, and visual character would be significant under CEQA because the vertical elements proposed under the LPA such as the OCS, TPSS, a pedestrian bridge at the Sylmar/San Fernando Metrolink station (if constructed), as well as the MSF could obstruct or

diminish views and adversely visual quality substantially detract from existing views. The OCS, in particular, would substantially affect existing views of scenic vistas and resources because of their height, approximately 30 feet tall and the fact they would be located every 90 to 170 feet along the 9.2 miles of LRT tracks.

Cumulative

Construction activities associated with past, present, and reasonably foreseeable future projects that would result in visual impacts due to the presence of construction equipment and materials, would be less than significant because they would be temporary and impacts could be further minimized or mitigated through mitigation measures. Although construction of the LPA could also result in similar construction impacts and contribute to adverse cumulative impacts, because the impacts would be temporary and minimized by the proposed mitigation measures identified below, impacts during construction would not be cumulatively considerable.

Construction activities due to past, present, and reasonably foreseeable future projects that would result in the removal of or damage to scenic resources, including trees or other vegetation, could result in significant cumulative visual impacts. The removal of trees and vegetation due to construction of the LPA would contribute to those significant cumulative impacts. However, mitigation measures as identified below would reduce the project's contribution to potential cumulative impacts to less than significant.

During operation, the LPA would result in potentially significant operational visual impacts on sensitive viewer groups. Past projects have resulted in a highly urbanized landscape along the project corridor from the construction of buildings, transportation infrastructure, and other structures that have adversely affected scenic vistas, scenic resources, and visual character and quality. In addition, other present or reasonably foreseeable future projects in the area could further degrade the visual character and quality of the area. Therefore, cumulative impacts from past, present, and reasonably foreseeable future projects are significant. As a result, any adverse impacts from the LPA would be considered cumulatively considerable.

2.3.2 Mitigation Measures

Compliance Design Requirements and Design Features

The LPA would be designed in accordance with local codes and ordinances. This would include visual and aesthetic elements including siting and height restrictions, structure scale, streetscaping features, and landscape design.

Construction Mitigation Measures

MM-VIS-1: Construction staging shall be located away from residential and recreational areas and shall be screened to minimize visual intrusion into the surrounding landscape. The screening shall be a height and type of material that is appropriate for the context of the surrounding land uses. There shall be Metro-branded community-relevant messaging on the perimeter of the

construction staging walls. Lighting within construction areas shall face downward and shall be designed to minimize spillover lighting into adjacent properties.

MM-VIS-2: Vegetation removal shall be minimized and shall be replaced following construction either in-kind or following the landscaping design palette for the project, which would be prepared in consultation with the Cities of Los Angeles and San Fernando, including the City Tree Removal Policy and replacement ratio.

MM-VIS-3: Scenic resources, including landscape elements such as rows of palm trees (along Van Nuys Boulevard) or mature trees (along San Fernando Road) and uniform lighting, shall be preserved, where feasible.

Operational Mitigation Measures

The following measures are recommended to minimize potential impacts:

MM-VIS-4: Lighting associated with the project shall be designed to face downward and minimize spillover lighting into adjacent properties, in particular residential and recreational properties.

MM-VIS-5: Infrastructure elements shall be designed with materials that minimize glare.

2.3.3 Findings

For the above impacts to Visual Quality and Aesthetic, the following findings are made:

☒ Changes or alterations have been required in, or incorporated into, the project to avoid or substantially lessen the significant environmental effect as identified in the FEIS/FEIR.

☐ Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency

☒ Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the FEIS/FEIR.

The potential Visual Quality and Aesthetic impacts due to the proposed project are found to be.

☒ Significant ☐ Not Significant

2.3.4 Rationale

The potential construction impacts that could result in visual impacts within and surrounding the project corridor would be less than significant after implementation of proposed mitigation measures.

The potential operational impacts due to introduction of structures and vertical elements including the OCS would be significant. No feasible measures have been identified that would reduce impacts to a less-than-significant level.

2.3.5 References

Section 4.5, Visual Quality and Aesthetics, of the EIR describes the LPA's impacts on aesthetics and visual quality and identifies feasible mitigation measures.

2.4 Air Quality

2.4.1 Description of Significant Impacts

Construction

Project construction under the LPA would result in the short-term generation of criteria pollutant emissions. Emissions would include: (1) fugitive dust generated from curb/pavement demolition, site work, and other construction activities; (2) hydrocarbon (ROG) emissions related to the application of architectural coatings and asphalt pavement; (3) exhaust emissions from powered construction equipment; and (4) motor vehicle emissions associated with construction equipment, worker commute, and debris-hauling activities. Estimated worst-case regional construction emissions would exceed the SCAQMD regional emissions thresholds for reactive organic gases (ROG) and nitrogen oxides (NOx) and localized construction mass emissions would exceed SCAQMD thresholds for NOx and fine particulate matter (PM_{10} and $PM_{2.5}$), which would be a significant impact.

2.4.2 Mitigation Measures

Compliance Design Requirements and Design Features

The project would comply with all applicable SCAQMD Rules, which include Rule 403 (fugitive dust), Rule 431.2 (sulfur content of liquid fuels) and Rule 1113 (architectural coatings), among other rules.

Construction Mitigation Measures

The following measures are prescribed and shall be implemented to reduce short-term construction emissions that exceed SCAQMD significance thresholds:

MM-AQ-1: Construction vehicle and equipment trips and use shall be minimized to the extent feasible and unnecessary idling of heavy equipment shall be avoided.

MM-AQ-2: Solar powered, instead of diesel powered, changeable message signs shall be used.

MM-AQ-3: Electricity from power poles, rather than from generators, shall be used where feasible.

MM-AQ-4: Engines shall be maintained and tuned per manufacturer's specifications to perform at EPA certification levels and to perform at verified standards applicable to retrofit technologies. Periodic,

unscheduled inspections shall be conducted to limit unnecessary idling and to ensure that construction equipment is properly maintained, tuned, and modified consistent with established specifications.

MM-AQ-5: Any tampering with engines shall be prohibited and continuing adherence to manufacturer's recommendations shall be required.

MM-AQ-6: New, clean (diesel or retrofitted diesel) equipment meeting the most stringent applicable federal or state standards shall be used and the best available emissions control technology shall be employed. Tier 4 engines shall be used for all construction equipment. If non-road construction equipment that meets Tier 4 engine standards is not available, the Construction Contractor shall be required to use the best available emissions control technologies on all equipment.

MM-AQ-7: EPA-registered particulate traps and other appropriate controls shall be used where suitable to reduce emissions of diesel particulate matter (PM) and other pollutants at the construction site.

MM-AQ-8: Consistent with South Coast Air Quality Management District Rule 1113, all architectural coatings for building envelope associated with the project shall use coatings with a Volatile Organic Compound content of 50 grams per liter or less.

MM-AQ-9: The Design-Builder shall implement feasible means and methods that would minimize cumulative air quality impacts during the construction period, including, but not limited to, the following:

1. Timing project-related construction activities associated with the MSF, stations, and track installation such that overlapping schedules are minimized.

2. Timing project-related construction activities so that overlapping schedules with other projects in the area are avoided.

3. Reducing the number of pieces of diesel-fueled equipment used at a given time when construction activities occur in the vicinity of sensitive receptors, such as residences, schools, parks, hospitals, and nursing homes.

2.4.3 Findings

For the above impacts to air quality, the following findings are made:

☒ Changes or alterations have been required in, or incorporated into, the project to avoid or substantially lessen the significant environmental effect as identified in the FEIS/FEIR.

☐ Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency

☒ Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the FEIS/FEIR.

The potential air quality impacts due to the proposed project are found to be.

☒ Significant ☐ Not Significant

2.4.4 Rationale

Construction of the LPA would result in the emission of ROGs and NOx in excess of regional thresholds. ROG and NOx emissions would be reduced below the regional thresholds following the implementation of mitigation measures. Construction of the LPA would exceed the LSTs for PM10 and PM2.5 after the implementation of mitigation measures, which would be an unavoidable significant impact. No additional feasible mitigation measures have been identified to reduce PM_{10} and $PM_{2.5}$ to a less-than-significant impact.

2.4.5 References

Section 4.6, Air Quality, of the EIR describes the LPA's impacts on air quality and identifies proposed feasible mitigation measures.

2.5 Noise and Vibration

2.5.1 Description of Significant Impacts

Construction

Noise from construction of the LPA would result in a significant impact. Construction of the LPA would require the use of heavy earth-moving equipment, pneumatic tools, generators, concrete pumps, and similar equipment. The predicted noise level from a typical 8-hour work-shift is 87 dBA (8-hour L_{eq}) at 50 feet, which is about 15 to 20 decibels higher than the ambient noise level.

Many construction activities, such as pavement breaking and the use of tracked vehicles such as bulldozers could result in noticeable levels of ground-borne vibration. These activities would be limited in duration and vibration levels are likely to be well below thresholds for minor cosmetic building damage. However, the predicted vibration levels for equipment that produces the highest levels of vibration, such as a vibratory roller, is about equal to the construction vibration CEQA significance threshold for non-engineered and timber masonry buildings at a distance of 25 feet.

Operational

Changes in noise levels as a result of the LPA would occur as a result of the introduction of light rail vehicles and a decrease in the volume of buses. The predicted noise levels would exceed the CEQA significance thresholds at eight clusters of residences. Moderate noise impacts are predicted at an additional 67 clusters of sensitive receivers, which extend along much of Van Nuys Boulevard. TPSSs

are the only ancillary equipment associated with the LPA that have the potential to cause noise impacts. Noise impact is predicted to occur at ten clusters of sensitive receivers, which are all located within 20 feet of a TPSS site.

The predicted vibration levels from LRT trains would exceed the CEQA significance threshold at 24 clusters of residential receivers and two institutional land use areas. There are a total of 705 residential units within the clusters of sensitive receivers where vibration impacts are predicted:

- **Van Nuys Boulevard between Parthenia Street and Woodman Avenue.** Vibration propagation measurements show that there is very efficient vibration propagation through this area, where multifamily residences line both sides of Van Nuys Boulevard. Vibration levels are predicted to exceed the residential threshold level by 5 decibels.

Traditional crossovers can increase vibration levels by up to 10 dB at nearby receivers. Due to the close proximity of receivers to the alignment, predicted vibration levels assume the use of low-impact devices such as spring or conformal frogs, which increase vibration levels less dramatically, by around 5 dB. Without the low-impact frogs, impacts are predicted at 6 additional residential and 2 additional institutional locations. Assuming the use of low-impact frogs, predicted vibration impacts remain at two crossover locations:

- **Van Nuys Boulevard and Osborne Street.** This crossover increases vibration levels for multifamily residences on the east and west sides of Van Nuys Boulevard. The predicted vibration levels exceed the limit by up to 4 dB at these receivers.
- **Van Nuys Boulevard and Canterbury Avenue.** The crossover to the in-line siding track at this location is predicted to increase vibration levels for the two multifamily residential buildings north of Van Nuys Boulevard, and a cluster of single-family residences east of Canterbury Avenue and south of Van Nuys Boulevard. Vibration levels exceed the limit by up to 4 dB at these receivers.

Cumulative

Construction Impacts

The residual increases in noise levels due to the LPA, when combined with increased noise generated by other sources or projects in the vicinity of the project 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 project study area during construction of the LRT. 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, because the construction noise levels associated with the LPA could increase ambient noise levels by as much as 15 to 20 decibels, the project's contribution would be cumulatively considerable over the temporary construction period.

Because vibration impacts are evaluated based on single-event levels, the fact that the cumulative vibration impacts project study area is limited to within 50 feet of project construction activities, and because mitigation measures would reduce vibration generated by the LPA's 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 LPA and other projects are not expected to result in significant cumulative vibration impacts on sensitive uses within the project study area.

Operational Impacts

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 noise from the LRT, however, would be significant. Consequently, the cumulative impacts due to operational noise from the LPA and roadway traffic would be significant. However, proposed mitigation measures would reduce the operational noise impacts to a less-than-significant level; therefore, the noise impacts from the LPA would not be cumulatively considerable after mitigation.

A possibly significant source of noise along the San Fernando Road portion of the corridor is the proposed Brighton to Roxford double track commuter rail project. If the double track commuter rail project were constructed in the Metro owned railroad right-of-way along San Fernando Road, it would likely result in a significant noise impact and require noise mitigation. However, it is not known whether commuter rail noise impacts could be mitigated to a less-than-significant level. Therefore, although the potential increase in noise levels along San Fernando due to the LPA would be less than significant after mitigation, remaining noise due to the LPA, when combined with other future sources of noise along San Fernando Road, such as the double track project, would be cumulatively considerable or significant.

Because vibration impact is evaluated based on single-event levels and because it is unlikely that a LRT vehicle and other potential vibration sources would simultaneously pass by a vibration-sensitive use within 150 feet, operation of the LPA is not expected to result in significant cumulative vibration impacts.

2.5.2 Mitigation Measures

Construction Mitigation Measures

Construction noise impacts can be reduced with operational methods, scheduling, equipment choice, and acoustical treatments. The following best-practice noise mitigation measures shall be implemented to minimize annoyance from construction noise:

MM-NOI-1a: Specific measures to be employed to mitigate construction noise impacts shall be developed by the contractor and presented in the form of a Noise Control Plan. The Noise Control Plan shall be submitted for review and approval before the beginning of construction noise activities.

MM-NOI-1b: The contractor shall adequately notify the public of construction operations and schedules no less than 72 hours in advance of construction through a construction notice with confirmed details and a look-ahead briefing several weeks in advance.

MM-NOI-1c: If a noise variance from Section 41.40(a) of the Los Angeles Municipal Code is sought for nighttime construction work, a noise limit shall be specified. The contractor shall employ a combination of the noise-reducing approaches listed in MM-NOI-1d to meet the noise limit.

MM-NOI-1d: Where feasible, the contractor shall use the following noise-reducing approaches:

- The contractor shall use specialty equipment with enclosed engines and/or high-performance mufflers.
- The contractor shall locate equipment and staging areas as far from noise-sensitive receivers as possible.
- The contractor shall limit unnecessary idling of equipment.
- The contractor shall install temporary noise barriers to enclose stationary noise sources, such as compressors, generators, laydown and staging areas, and other noisy equipment.
- The contractor shall reroute construction-related truck traffic away from residential buildings to the extent practicable.
- The contractor shall sequence the use of equipment so that simultaneous use of the loudest pieces of equipment is avoided as much as practicable.
- The contractor shall avoid the use of impact equipment and, where practicable, use non-impact equipment. Non-impact equipment could include electric or hydraulic-powered equipment rather than diesel and gasoline-powered equipment where feasible.
- The contractor shall use portable noise control enclosures for welding in the construction staging area.
- The contractor shall use lined or covered storage bins, conveyors, and chutes with noise-deadening material for truck loading and operations.
- Contractor shall use strobe lights or other OSHA-accepted methods rather than back-up alarms during nighttime construction.

MM-VIB-1: Where equipment, such as a vibratory roller, that produces high levels of vibration is used near buildings, the Construction Vibration Control Plan shall also include mitigation measures to minimize vibration impact during construction. Recommended construction vibration mitigation measures that shall be considered and implemented where feasible include:

- The contractor shall minimize the use of tracked vehicles.
- The contractor shall avoid vibratory compaction.
- The contractor shall monitor vibration levels near sensitive receivers during activities that generate high vibration levels to ensure thresholds are not exceeded.

Operational Mitigation Measures

Predicted noise levels exceed the CEQA significance thresholds at eight clusters of sensitive receivers. The clusters of sensitive receivers are located near curves in the track alignment, the intersection of Van Nuys Boulevard and San Fernando Road where a row of buildings would be removed, and the intersection of Van Nuys Boulevard and Vesper Avenue. The following measures will be incorporated:

MM-NOI-2a: A sound wall shall be constructed at the northern edge of the alignment where the LRT curves to transition between Van Nuys Boulevard and San Fernando Road, in the area bounded by Pinney Street, El Dorado Avenue, Van Nuys Boulevard, and San Fernando Road. The sound wall shall be constructed to mitigate the increase in traffic noise levels that would result from removing the row of buildings in this area. Sound walls shall be constructed in such a fashion as to not impair the Train Operator vision triangle –sightlines.

MM-NOI-2b: Friction control shall be incorporated into the design for the curves at Van Nuys Boulevard/San Fernando Road, Van Nuys Boulevard/El Dorado Boulevard, and Van Nuys Boulevard/Vesper Avenue. Friction control may consist of installing lubricators on the rail or using an onboard lubrication system that applies lubrication directly to the wheel.

Noise impacts are also predicted near ten of the proposed TPSS sites. The measures to mitigate noise from the TPSS units are:

MM-NOI-3a: The following noise limit shall be included in the purchase specifications for the TPSS units: TPSS noise shall not exceed 50 dBA at a distance of 50 feet from any part of a TPSS unit.

MM-NOI-3b: The TPSS units shall be located within the parcel as far from sensitive receivers as feasible. If possible, the cooling fans shall be oriented away from sensitive receivers.

MM-NOI-3c: If necessary, a sound enclosure shall be built around the TPSS unit to further reduce noise levels at sensitive receivers to below the applicable impact threshold.

Predicted vibration levels could be reduced to below the CEQA significance thresholds at all sensitive receivers with traditional floating slab track and use of low-impact frogs. A floating slab consists of a concrete slab supported by rubber or steel springs. Floating slab is the most expensive vibration mitigation measure; however, it provides the most reduction in vibration levels. Further investigation may show that vibration levels could be reduced to below the applicable thresholds with a less expensive option, such as a continuous mat floating slab. Low-impact frogs such as conformal frogs and spring frogs result in a smoother transition over the gaps, reducing noise and vibration levels. Conformal frogs smooth the transition through wing slopes which match the wheel profile, and spring frogs use a spring-loaded mechanism. A moveable point frog includes a signal mechanism which allows trains running on the mainline to avoid any gaps in the rail, eliminating the noise and vibration impact of the special trackwork. Moveable point frogs are required mitigation measures in areas where other low-impact frogs do not provide enough vibration reduction.

MM-VIB-2a: Metro shall complete additional vibration analysis to confirm the locations where vibration levels would exceed NEPA significance thresholds as defined in the FTA (2018) *Transit Noise and Vibration Impact Assessment* guidance manual. Where exceedances would occur, the contractor shall employ methods to reduce vibration to levels below applicable thresholds. A floating-slab track, a continuous-mat floating slab, or a vibration-isolated embedded track system, such as QTrack, or other feasible measures, could be considered.

MM-VIB-2b: The contractor shall install moveable point frogs at the crossovers on Van Nuys Boulevard/Osborne Street and at Van Nuys Boulevard/Canterbury Avenue. If further investigation confirms that an alternative low-impact frog would reduce vibration levels below the applicable thresholds, the alternative may be installed.

MM-VIB-2c: Low-impact frogs such as conformal frogs or spring frogs shall be used at all crossovers and turnouts not covered under MM-VIB-2b. Traditional crossovers may be used in locations where analysis shows vibration levels will not exceed the applicable thresholds at nearby sensitive receivers.

2.5.3 Findings

For the above impacts to Noise and Vibration, the following findings are made:

☒ Changes or alterations have been required in, or incorporated into, the project to avoid or substantially lessen the significant environmental effect as identified in the FEIS/FEIR.

☐ Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency

☒ Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the FEIS/FEIR.

The potential Noise and Vibration impacts due to the proposed project are found to be.

☒ Significant ☐ Not Significant

2.5.4 Rationale

The noise and vibration from construction of the LPA would be temporary; however, due to the increase in noise levels above ambient levels, the LPA would still result in significant and unavoidable impacts, even with implementation of proposed mitigation measures.

The noise and vibration from operation of the LRT would result in less-than-significant impacts with implementation of proposed mitigation measures.

2.5.5 References

Section 4.8 Noise and Vibration of the EIR describes the LPA's noise and vibration impacts and identifies proposed feasible mitigation measures.

2.6 Geology, Soils, and Seismicity

2.6.1 Description of Significant Impacts

Operational

On the north end of the alignment, the proposed pedestrian bridge or underpass for the Sylmar/San Fernando Metrolink Station is located within an Alquist-Priolo Geologic Hazards Zone (APEFZ) (see Figure 4.9-1 in the FEIS/FEIR). In addition, the Pacoima Wash Bridge on San Fernando Road is located in the City of Los Angeles FRSA (see Figure 4.9-1). If further studies indicate that there is a potential for fault rupture at the proposed Sylmar/San Fernando Metrolink Station pedestrian crossing and/or the Pacoima Wash Bridge on San Fernando Road, the fault rupture hazards to these project facilities could be significant.

Other project structures along the alignment including the Pacoima Channel Bridge, traffic and pedestrian signs, and train stop canopies would be subject to strong seismic ground shaking and could pose a hazard to riders and passers-by. In addition, the proposed catenary wires, traffic and pedestrian signs, and train stop canopies south of Vanowen Street would be subject to potential liquefaction hazards. The catenary wires would move during a seismic event and the system, like other light rail systems currently operated by Metro, would need to be inspected prior to continuing service.

Cumulative

Cumulative impacts could occur if subsurface excavations under the LPA and other nearby projects result in ground and differential settlement that could affect adjacent properties. However, the LPA includes mitigation measure MM-GEO-2. Compliance with mitigation measures, regulatory requirements, and design features would minimize impacts and as a consequence, the LPA would not result in a cumulatively considerable contribution to a significant cumulative impact on ground and differential settlement. Therefore, compliance with proposed design and mitigation measures would reduce potential impacts to a less-than-significant level.

2.6.2 Mitigation Measures

Compliance Design Requirements and Design Features

Construction and design would be performed in accordance with Metro's Design Criteria, the latest federal and state seismic and environmental requirements, and state and local building codes.

Operational Mitigation Measures

To reduce and minimize potential geologic hazards to project facilities and operations, the following Metro standard design criteria shall be implemented according to the *Metro Rail Design Criteria*, 2012.

MM-GEO-1: Metro design criteria require probabilistic seismic hazard analyses (PSHA) to estimate earthquake loads on structures. These analyses take into account the combined effects of all nearby faults to estimate ground shaking. During Final Design, site-specific PSHAs shall be used as the basis for evaluating the ground motion levels along the project corridor. The structural elements of the proposed project shall be designed and constructed to resist or accommodate appropriate site-specific estimates of ground loads and distortions imposed by the design earthquakes and conform to Metro's *Design Standards for the Operating and Maximum Design Earthquakes*. The concrete structures are designed according to the *Building Code Requirements for Structural Concrete* (ACI 318) by the American Concrete Institute.

MM-GEO-2: At liquefaction or seismic settlement prone areas, evaluations by geotechnical engineers shall be performed during Final Design to provide estimates of the magnitude of the anticipated liquefaction or settlement. Based on the magnitude of evaluated liquefaction, either structural design, or ground improvement (such as deep soil mixing) or deep foundations to non-liquefiable soil (such as drilled piles) measures shall be selected. Site-specific design shall be selected based on State of California guidelines and design criteria set forth in the *Metro Seismic Design Criteria*.

2.6.3 Findings

For the above impacts to Geology, the following findings are made:

☒ Changes or alterations have been required in, or incorporated into, the project to avoid or substantially lessen the significant environmental effect as identified in the FEIS/FEIR.

☐ Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency

☐ Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the FEIS/FEIR.

The potential Geology impacts due to the proposed project are found to be.

☐ Significant ☒ Not Significant

2.6.4 Rationale

Impacts would be less than significant under CEQA after implementation of the mitigation measures identified above.

2.6.5 References

Section 4.9, Geology, Soils, and Seismicity, of the EIR describes the LPA's geotechnical impacts and identifies proposed feasible mitigation measures.

2.7 Hazardous Waste and Materials

2.7.1 Description of Potential Impacts

Construction

Construction of proposed improvements may encounter hazardous materials during grading and excavation within the right-of-way. The Environmental Site Assessment (ESA) prepared in support of the FEIS/FEIR indicated that in or adjacent to the project right-of-way, there are potential instances of leaking underground storage tanks (LUSTs) and hazardous substances from industrial activities. In addition, it is likely that lead and arsenic may have been deposited within the soil along the project alignment and may occur at hazardous levels. Dust created from construction activities may contain hazardous contaminants. Construction equipment contains fuel, hydraulic oil, lubricants, and other hazardous materials, which could be released accidentally during operation of the equipment.

The LPA also includes MSF and TPSS facilities. The ESA indicated historical land usage as auto repair facilities, waste transfer facilities, manufacturing, and other industrial purposes at the potential properties to be acquired for the proposed MSF and TPSS sites. During demolition of the existing structures, lead based paint (LBP) and asbestos containing materials (ACM) may be encountered in waste building materials. The construction work for the proposed MSF and TPSS sites would generally include excavations in the upper 5 to 10 feet of soil and may encounter subsurface hazardous waste residue from spills or releases from the former facilities. Construction of the MSF and TPSS facilities would include removal of existing hazardous materials within the construction footprint.

Cumulative

The cumulative impacts are similar to the project impacts, 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. Given the extent of construction to construct the LPA, including the MSF, stations, and TPSS, there is a high probability that contaminated soils or groundwater would be encountered during construction.

2.7.2 Mitigation Measures

Compliance Requirements and Design Features

Compliance with the federal, state, and local regulations listed in Section 4.10.1.1 governing the investigation, testing, handling, treatment, transport, and disposal of hazardous wastes and materials would minimize potential impacts due to encountering hazardous materials. The project would also comply with all applicable SCAQMD Rules relevant to hazardous waste and materials including Rule 403 (fugitive dust).

Construction Mitigation Measures

MM-HAZ-1: An environmental investigation shall be performed during design for transit structures, TPSS locations, stations, and the MSF. The environmental investigation shall collect soil, groundwater, and/or soil gas samples to delineate potential areas of contamination that may be encountered during construction or operations. The environmental investigation shall include the following:

- Properties potentially to be acquired are listed on multiple databases and shall be evaluated further for contaminants that were manufactured, stored, or released from the facility. If contaminated soil (e.g., soil contaminated from organic wastes, sediments, minerals, nutrients, thermal pollutants, toxic chemicals, and/or other hazardous substances) is found, it shall be removed, transported to an approved disposal location, and remediated according to state law.
- Phase II subsurface investigations for potential impacts from adjoining current or former underground storage tanks (UST) sites and nearby LUST sites.
- A Phase II subsurface investigation to evaluate potential presence of PCE shall be performed along the portions of the project alignment that are adjacent to former and current dry cleaners. If contaminated soil is found, it shall be removed, transported to an approved disposal location, and remediated according to state law.
- If construction encroaches into the two former plugged and abandoned dry-hole oil exploration wells mapped adjacent to the proposed project right-of-way, the project team shall consult with DOGGR regarding the exact locations of the abandoned holes and the potential impact of the wells on proposed construction.
- The locations of proposed improvements involving excavations adjacent to (within 50 feet of) the electrical substation shall be screened prior to construction by testing soils within 5 feet of the existing ground surface for polychlorinated biphenyls (PCB)s. If contaminated soil is found, it shall be removed, transported to an approved disposal location, and remediated according to state law.
- Buildings that will be demolished shall have a comprehensive ACM inspection prior to demolition. In addition, ACM may be present in the existing bridge crossings at the Pacoima Diversion Channels. If improvements associated with the proposed project will disturb the existing bridge crossings, then these structures shall be evaluated for suspect ACM. If ACM is found, it shall be removed, and transported to an approved disposal location according to state law.

- Areas where soil may be disturbed during construction shall be tested for ADL according to Caltrans ADL testing guidelines. If contaminated soil is found, it shall be removed, transported to an approved disposal location, and remediated according to state law.
- Lead and other heavy metals, such as chromium, may be present within yellow thermoplastic paint markings on the pavement. These surfacing materials shall be tested for LBP prior to removal. If contaminated soil is found, it shall be removed, transported to an approved disposal location, and remediated according to state law.
- Former railroad rights-of-way that crossed or were adjacent to the project right-of-way may contain hazardous materials from the use of weed control, including herbicides and arsenic, and may also contain Treated Wood Waste (TWW). Soil sampling for potentially hazardous weed control substances shall be conducted for health and safety concerns in the event that construction earthwork involves soil removal from the former railroad rights-of-way. If encountered during construction, railroad ties designated for reuse or disposal (including previously salvaged railroad ties in the project right-of-way) shall be managed or disposed of as TWW in accordance with Alternative Management Standards provided in CCR Title 22 Section 67386.

MM-HAZ-2: The contractor shall implement a Worker Health and Safety Plan prior to the start of construction activities. All workers shall be required to review the plan, receive training if necessary, and sign the plan prior to starting work. The plan shall identify properties of concern, the nature and extent of contaminants that could be encountered during excavation activities, appropriate health and environmental protection procedures and equipment, emergency response procedures including the most direct route to a hospital, and contact information for the Site Safety Officer.

MM-HAZ-3: The contractor shall implement a Contaminated Soil/Groundwater Management Plan during construction to establish procedures to follow if contamination is encountered in order to minimize associated risks. The plan shall be prepared during the final design phase of the project, and the construction contractor shall be held to the level of performance specified in the plan. The plan shall include procedures for the implementation of the following measures:

- Contacting appropriate regulatory agencies if contaminated soil or groundwater (e.g., groundwater contaminated from organic wastes, sediments, minerals, nutrients, thermal pollutants, toxic chemicals, and/or other hazardous substances) is encountered
- Sampling and analysis of soil and/or groundwater known or suspected to be impacted by hazardous materials
- The legal and proper handling, storage, treatment, transport, and disposal of contaminated soil and/or groundwater shall be delineated and conducted in consultation with regulatory agencies and in accordance with established statutory and regulatory requirements in Section 4.10.1.1 of this EIR
- Implementation of dust control measures such as soil wetting, wind screens, etc., for contaminated soil

- Groundwater collection, treatment, and discharge shall be performed according to applicable standards and procedures listed in Section 4.10.1.1 of this EIR

MM-HAZ-4: The contractor shall properly maintain equipment and properly store and manage related hazardous materials, so as to prevent motor oil, or other potentially hazardous substances used during construction, from spilling onto the soil. If contaminated soil is found, it shall be removed, transported to an approved disposal location, and remediated according to state law.

MM-HAZ-5: If reconstruction of the Pacoima Wash bridge that crosses Metro right-of-way is required, the construction spoils (e.g., excavated soils, cuttings generated during installation of CIDH piles), including those in contact with the groundwater, shall be contained and tested for total chromium, 1,4-dioxane, trichloroethylene (TCE), and PCE to determine appropriate disposal.

MM-HAZ-6: A Contaminated Soil/Groundwater Management Plan shall be prepared during final design that describes appropriate methods and measures to manage contamination encountered during construction.

2.7.3 Findings

For the above impacts to hazards and hazardous materials, the following finding is made:

☒ Changes or alterations have been required in, or incorporated into, the project to avoid or substantially lessen the significant environmental effect as identified in the FEIS/FEIR.

☐ Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency

☐ Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the FEIS/FEIR.

The potential hazards and hazardous materials impacts due to the proposed project are found to be.

☐ Significant ☒ Not Significant

2.7.4 Rationale

While construction on the project site has potential to encounter hazardous materials in excavated soils, groundwater, or in the materials of the demolished buildings, mitigation measures would ensure that, if encountered, these hazardous materials are handled appropriately to minimize the risk of exposure to construction workers and the general population.

2.7.5 References

Section 4.10 of the EIR describes the LPA's hazardous waste and materials impacts and identifies proposed feasible mitigation measures.

2.8 Ecosystems and Biological Resources

2.8.1 Description of Significant Impacts

Construction

Construction of major project components would require removal of trees, which could potentially affect nesting birds and/or tree roosting bats. Construction would also result in increases in noise, movement, and vibration at the bridges over the Pacoima Wash, the Pacoima Diversion Canal, and East Canyon Creek and the existing overpasses at Interstate 5, State Route 118, and the Union Pacific Railroad (on Van Nuys Boulevard). As a consequence, the LPA could result in potentially significant impacts under CEQA to nesting birds or roosting bats if construction activities remove vegetation where nesting birds are present or affect structures or vegetation used by special-status bat species. However, Mitigation Measures BIO-1 and BIO-2, detailed below, would reduce potential impacts to less than significant under CEQA.

The potential bridge upgrades required under the LPA could potentially affect Waters of the US (WoUS), Waters of the State (WoS), and California Department of Fish and Wildlife (CDFW) jurisdictional streambeds, though it should be noted that the channels that may be affected on are concrete lined and contain trace amounts of vegetation. If project-related impacts in WoUS occur, permitting under Section 404 of the Clean Water Act (CWA) may be required, most likely in the form of a Nationwide Permit 14 if project-related impacts on WoUS are less than 0.5 acre. Impacts on WoUS/WoS would also trigger the need for a Section 401 Certification, issued by the Regional Water Quality Control Board (RWQCB). Acquisition of these permits would ensure compliance with CWA (Section 401 and 404). A streambed Alteration Agreement, as regulated by Section 1602 of the California Fish and Game Code, would be required for project-related impacts on a CDFW jurisdictional streambed.

If permanent impacts on WoUS/WoS and CDFW unvegetated streambeds are unavoidable, compensatory mitigation may be required under section 401 and 404 of the CWA and Section 1602 of the California Fish and Game Code. This is expected to be required at a minimum 1:1 ratio. Final compensatory mitigation will be determined during the aquatic permitting process. In addition, temporary impacts would be required to be restored to pre-project conditions at the location of these impacts. Impacts on WoUS/WoS and CDFW streambeds would be less than significant under CEQA after compliance with regulatory permit requirements and implementation of mitigation measure MM BIO-3 described below.

2.8.2 Mitigation Measures

Construction Mitigation Measures

MM-BIO-1: Avoid and Minimize Project-Related Impact on Special-Status Bat Species

In the maternity season (April 15 through August 31) prior to the commencement of construction activities, a field survey shall be conducted by a qualified biologist to determine the potential presence of colonial bat roosts (including palm trees) on or within 100 feet of the project boundaries. Should a potential roost be identified that will be affected by proposed construction activities, a visual inspection and/or one-night emergence survey shall be used to determine if it is being used as a maternity-roost.

To avoid any impacts on roosting bats resulting from construction activities, the following measures shall be implemented:

Bridges and Overpasses

- Should potential bat roosts be identified that will require removal, humane exclusionary devices shall be used. Installation would occur outside of the maternity season and hibernation period (February 16-April 14 and August 16-October 30, or as determined by a qualified biologist) unless it has been confirmed as absent of bats. If the roost has been determined to have been used by bats, the creation of alternate roost habitat shall be required, with CDFW consultation. The roost shall not be removed until it has been confirmed by a qualified biologist that all bats have been successfully excluded.
- Should an active maternity roost be identified, a determination (in consultation with the California Department of Fish and Wildlife or a qualified bat expert) shall be made whether indirect impacts of construction-related activities (i.e., noise and vibration) could substantially disturb roosting bats. This determination shall be based on baseline noise/vibrations levels, anticipated noise-levels associated with construction of the proposed project, and the sensitivity to noise-disturbances of the bat species present. If it is determined that noise could result in the temporary abandonment of a day-roost, construction-related activities shall be scheduled to avoid the maternity season (April 15 through August 31), or as determined by the biologist.

Trees

All trees to be removed as part of the project shall be evaluated for their potential to support bat roosts. The following measures would apply to trees to be removed that are determined to provide potential bat roost habitat by a qualified biologist.

- If trees with colonial bat roost potential require removal during the maternity season (April 15 through August 31), a qualified bat biologist shall conduct a one-night emergence survey during acceptable weather conditions (no rain or high winds, night temperatures above 52˚F) or if conditions permit, physically examine the roost for presence or absence of bats (such as with lift equipment) before the start of construction/removal. If the roost is determined to be occupied

during this time, the tree shall be avoided until after the maternity season when young are self-sufficiently volant.

- If trees with colonial bat roost potential require removal during the winter months when bats are in torpor, a state in which the bats have significantly lowered their physiological state, such as body temperature and metabolic rate, due to lowered food availability. (October 31 through February 15, but is dependent on specific weather conditions), a qualified bat biologist shall physically examine the roost if conditions permit for presence or absence of bats (such as with lift equipment) before the start of construction. If the roost is determined to be occupied during this time, the tree shall be avoided until after the winter season when bats are once again active.
- Trees with potential colonial bat habitat can be removed outside of the maternity season and winter season (February 16 through April 14 and August 16 through October 30, or as determined by a qualified biologist) using a two-step tree trimming process that occurs over 2 consecutive days. On Day 1, under the supervision of a qualified bat biologist, Step 1 shall include branches and limbs with no cavities removed by hand (e.g., using chainsaws). This will create a disturbance (noise and vibration) and physically alter the tree. Bats roosting in the tree will either abandon the roost immediately (rarely) or, after emergence, will avoid returning to the roost. On Day 2, Step 2 of the tree removal may occur, which would be removal of the remainder of the tree. Trees that are only to be trimmed and not removed would be processed in the same manner; if a branch with a potential roost must be removed, all surrounding branches would be trimmed on Day 1 under supervision of a qualified bat biologist and then the limb with the potential roost would be removed on Day 2.
- Trees with foliage (and without colonial bat roost potential), such as sycamores, that can support lasiurine bats, shall have the two-step tree trimming process occur over one day under the supervision of a qualified bat biologist. Step 1 would be to remove adjacent, smaller, or non-habitat trees to create noise and vibration disturbance that would cause abandonment. Step 2 would be to remove the remainder of tree on that same day. For palm trees that can support western yellow bat (the only special-status lasiurine species with the potential to occur in the project area), shall use the two-step tree process over two days. Western yellow bats may move deeper within the dead fronds during disturbance. The two-day process will allow the bats to vacate the tree before removal.

MM BIO-2: Avoid Impacts on Nesting Birds (including raptors)

To avoid any impacts on migratory birds, resulting from construction activities that may occur during the nesting season, March 1 through August 31, the following measure shall be implemented:

- A qualified biologist shall conduct a preconstruction survey of the proposed construction alignment with a 150-foot buffer for passerines and 500-feet for raptors around the site. This preconstruction survey shall commence no more than 3 days prior to the onset of construction, such as clearing and grubbing and initial ground disturbance.
- If a nest is observed, an appropriate buffer shall be established, as determined by a qualified biologist, based on the sensitivity of the species. For nesting raptors, the minimum buffer shall

be 150 feet. The contractor shall be notified of active nests and directed to avoid any activities within the buffer zone until the nests are no longer considered to be active by the biologist.

MM BIO-3: Jurisdictional Waters

Any work resulting in materials that could be discharged into jurisdictional features shall adhere to strict best management practices (BMPs) to prevent potential pollutants from entering any jurisdictional feature. Applicable BMPs to be applied shall be included in the Stormwater Pollution Prevention Plan and/or Water Quality Management Plan and shall include, but not be limited to, the following BMPs as appropriate:

- Containment around the site shall include use of temporary measures such as fiber rolls to surround the construction areas to prevent any spills of slurry discharge or spoils recovered during the separation process;
- Downstream drainage inlets shall be temporarily covered to prevent discharge from entering the storm drain system;
- Construction entrances/exits shall be properly set up so as to reduce or eliminate the tracking of sediment and debris offsite by including grading to prevent runoff from leaving the site, and establishing “rumble racks” or wheel water points at the exit to remove sediment from construction vehicles;
- Onsite rinsing or cleaning of any equipment shall be performed in contained areas and rinse water shall be collected for appropriate disposal;
- Use of a tank on work sites to collect the water for periodic offsite disposal;
- Soil and other building materials (e.g., gravel) stored onsite shall be contained and covered to prevent contact with stormwater and offsite discharge; and
- Water quality of runoff shall be periodically monitored before discharge from the site and into the storm drainage system.

MM BIO-4: A Project Tree Report Shall Be Approved by the City of Los Angeles and City of San Fernando

Prior to construction, the contractor shall review the approved alternative alignment to determine whether any trees protected by the City of Los Angeles Tree Ordinance 177404 and City of San Fernando Comprehensive Tree Management Program Ordinance (Ordinance No. 1539) will be removed or trimmed. A tree report must be prepared, by a qualified arborist, for the project and approved by each city. Trees approved for removal (or replacement) shall be done in accordance to the specifications outlined in the city ordinances.

2.8.3 Findings

For the above impacts to Ecosystems and Biological Resources, the following finding is made:

☒ Changes or alterations have been required in, or incorporated into, the project to avoid or substantially lessen the significant environmental effect as identified in the FEIS/FEIR.

☐ Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency

☐ Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the FEIS/FEIR.

The potential Ecosystems and Biological Resources impacts due to the proposed project are found to be.

☐ Significant ☒ Not Significant

2.8.4 Rationale

Impacts associated with project construction would be reduced to less than significant with implementation of the above listed mitigation measures.

2.8.5 References

Section 4.12, Ecosystems and Biological Resources, of the EIR describes the LPA's impacts on biological resources and identifies proposed feasible mitigation measures.

2.9 Safety and Security

2.9.1 Description of Significant Impacts

Construction

Construction of the LPA may have temporary impact on public safety and security in the project study area. During construction, motorists, pedestrians, and bicyclists in close proximity to construction activities would experience circulation impacts and could be exposed to hazards posed by construction activities and equipment. Construction activities could also result in lane closures, traffic detours, and designated truck routes, which could adversely affect emergency vehicle response time, a potentially significant impact under CEQA.

Operational

Pedestrian, Vehicle, and Bicycle Safety

Issues of pedestrian safety under the LPA would include pedestrian safety along the alignment and at station locations and designated crossings. The proposed 14 at-grade stations could introduce a new safety hazard for pedestrians if the stations do not adequately account for pedestrian traffic and

movement. The occurrence of this hazard may be attributed to the inherent purpose of a station, where large numbers of people congregate and cross the trackway to access or depart from the transit stations, thus creating a potential hazard of collision between pedestrians and LRT vehicles. Pedestrian safety impacts are potentially significant without mitigation. Implementation of mitigation measures would reduce effects/impacts to less than significant under CEQA.

Along Van Nuys Boulevard, where the existing sidewalks on each side of Van Nuys Boulevard are approximately 13 feet wide, sidewalks would be narrowed to 10 feet to accommodate the installation of the LRT line. (Note: At Van Nuys Boulevard and Amboy Avenue [east of Van Nuys and north of Amboy], the sidewalk would be narrowed from 13 feet to 9 feet.) Although the new sidewalk width would meet the minimum 10-foot-wide accessibility requirements, at some locations with higher pedestrian activity (at the proposed Vanowen Station), the reduction in sidewalk width (from 13 feet to 10 feet) would result in further crowding of the sidewalk, particularly during passenger boarding and exiting of buses. Crowded sidewalks could affect pedestrian safety, particularly for people with limited mobility. The sidewalk reduction, therefore, would result in a potentially significant impact on pedestrians.

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

Security

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

Cumulative

The lane closures or traffic detours during construction of the LPA and other potential lane or road closures due to the concurrent construction of other projects could result in significant cumulative impacts to emergency vehicle response time.

2.9.2 Mitigation Measures

Construction Mitigation Measures

MM-SS-1: Alternate walkways for pedestrians shall be provided around construction staging sites in accordance with ADA requirements.

MM-SS-2: Safe and convenient pedestrian routes to local schools shall be maintained during construction.

MM-SS-3: Ongoing communication with school administrators shall be maintained to ensure sufficient notice of construction activities that could affect pedestrian routes to schools is provided.

MM-SS-4: All pedestrian and bicyclist detour locations around staging sites shall be signed and marked in accordance with the Manual on Uniform Traffic Control Devices "work zone" guidance, and other applicable local and state requirements.

MM-SS-5: Appropriate traffic controls (signs and signals) shall be installed and maintained to ensure pedestrian and vehicular safety.

MM-SS-6: To the extent feasible, construction haul trucks shall not use haul routes that pass any school, except when the school is not in session.

MM-SS-7: Staging or parking of construction-related vehicles, including worker-transport vehicles, shall not occur on or adjacent to a school property when school is in session.

MM-SS-8: Crossing guards or flaggers shall be provided at affected school crossings when the safety of children may be compromised by construction-related activities.

MM-SS-9: Barriers or fencing shall be installed to secure construction equipment and to minimize trespassing, vandalism, short-cut attractions, and attractive nuisances.

MM-SS-10: Security patrols shall be provided to minimize trespassing, vandalism, and short-cut attractions where construction activities occur in the vicinity of local schools.

MM-SS-11: Project plans, work plans, and traffic control measures shall be coordinated with emergency responders during preliminary engineering, final design, and construction to limit effects on emergency response times.

Operational Mitigation Measures

MM-SS-12: All stations shall be illuminated to avoid shadows and all pedestrian pathways leading to/from sidewalks and parking facilities shall be well illuminated. In addition, lighting would provide excellent visibility for train operators to be able to react to possible conflicts, especially to pedestrians crossing the track.

MM-SS-13: Proposed station designs shall not include design elements that obstruct visibility or observation nor provide discrete locations favorable to crime; pedestrian access to at-grade stations shall be at ground-level with clear sight lines.

MM-SS-14: The following measures shall be implemented to reduce pedestrian circulation impacts and hazards:

- Sidewalk widths shall be designed with the widest dimensions feasible in conformance with the Los Angeles/Metro's adopted "Land Use/Transportation Policy" .
- Minimum widths shall not be less than those allowed by the State of California Title 24 access requirements, or the ADA design recommendations. Section 1113A of Title 24 states that walks and sidewalks shall be a minimum of 48 inches (1,219 mm) in width, except that

walks serving dwelling units in covered multi-family dwelling buildings may be reduced to 36 inches (914 mm) in clear width except at doors.

- Accommodating pedestrian movements and flows shall take priority over other transportation improvements, including automobile access.
- Physical improvements shall ensure that all stations are fully accessible as defined in the ADA.

MM-SS-15: Wide crosswalks shall be provided in areas immediately around proposed stations to facilitate pedestrian mobility.

MM-SS-16: Metro shall coordinate and consult with the LAFD, LAPD, LASD, and City of San Fernando Police Department to develop safety and security plans for the proposed alignment, parking facilities, and station areas.

MM-SS-17: Fire separations shall be provided and maintained in public occupancy areas. Station public occupancy shall be separated from station ancillary occupancy by a minimum 2-hour fire-rated wall. The only exception is that a maximum of two station agents, supervisors, or information booths may be located within station public occupancy areas.

MM-SS-18: For portions of the alignment where pedestrians and/or motor vehicles must cross the tracks, Metro shall prepare grade crossing applications in coordination with the California Public Utilities Commission (CPUC) and local public agencies, such as LADOT, City of Los Angeles Bureau of Engineering, and the City and County of Los Angeles Fire Departments. Crossings shall require approval from the CPUC and shall meet applicable CPUC standards for grade crossings.

MM-SS-19: All proposed LRT stations and related parking facilities shall be equipped with monitoring equipment, which would primarily consist of video surveillance equipment to monitor strategic areas of the LRT stations and walkways, and/or be monitored by Metro security personnel on a regular basis.

MM-SS-20: Metro shall implement a security plan for LRT operations. The plan shall include both in-car and station surveillance by Metro security or other local jurisdiction security personnel.

MM-SS-21: Metro is continuing to investigate light rail vehicle modifications to increase light rail vehicle safety and minimize or prevent train and pedestrian conflicts. Metro's design criteria also identifies multiple efforts to increase light rail vehicle safety and minimize or prevent the potential for pedestrians and vehicle conflicts. Measures identified shall be included during the final design of the LPA.

MM-SS-22: To reduce potential risk of collisions between LRTs and automobiles on the street portion of the LPA, Metro shall coordinate with the CPUC, City and County of Los Angeles traffic control departments, City of Los Angeles Bureau of Engineering, and the City and County of Los Angeles Fire Departments, and also comply with the Federal Highway Administration's Manual on Uniform Traffic Control Devices for signing and pavement marking treatments.

MM-SS-23: The diverse needs of different types of traveling public including senior citizens, disabled citizens, low-income citizens, shall be addressed through a formal educational and outreach

campaign. The campaign shall target these diverse community members to educate them on proper system use and benefits of LRT ridership.

2.9.3 Findings

For the above impacts to Safety and Security, the following finding is made:

☒ Changes or alterations have been required in, or incorporated into, the project to avoid or substantially lessen the significant environmental effect as identified in the FEIS/FEIR.

☐ Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency

☒ Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the FEIS/FEIR.

The potential Safety and Security impacts due to the proposed project are found to be.

☒ Significant ☐ Not Significant

2.9.4 Rationale

After implementation of the proposed mitigation measures, the proposed impacts due to reduced sidewalk width in some locations, the potential for increased conflicts between bicyclists and motor vehicles, and increased delay for emergency responders during project operation would remain and would be unavoidable significant impacts under CEQA.

2.9.5 References

Section 4.14 Safety and Security of the FEIS/FEIR describes the LPA's impacts on Safety and Security and identifies proposed feasible mitigation measures. Also, please note that the mitigation measures identified above incorporate revisions made in response to comment letter AL10 (see Appendix A1 to the FEIS/FEIR) from the Los Angeles Unified School District (see Appendix A2 for the responses to comment letter AL10).

2.10 Parklands and Community Facilities

Construction

The LPA construction activities would result in noise, dust, odors, and traffic delays resulting from haul trucks and construction equipment in public streets and staging areas. These temporary impacts could adversely affect the recreational values of adjacent parklands or could cause disturbance to community facilities that are sensitive to these impacts, such as schools, libraries, hospitals, daycare facilities, and senior facilities. As described in Sections 4.6 and 4.8 of the FEIS/FEIR, respectively,

localized air quality impacts and noise impacts on nearby sensitive uses during construction of the LPA would be significant under CEQA.

Construction of the LPA may also result in visual impacts on viewers from parklands and community facilities within and surrounding the project corridor, which could adversely affect the aesthetic value of these resources. Construction activities at staging areas and construction sites may introduce considerable heavy equipment such as cranes and associated vehicles, including bulldozers, backhoes, graders, scrapers, and trucks, into the view corridor of public streets, sidewalks, and properties. In addition, mature vegetation, including trees, could temporarily or permanently be removed from some areas. These visual impacts on nearby visually sensitive uses would be significant under CEQA; however, they would be reduced to less-than-significant with implementation of proposed mitigation measures.

Operational

The following parks are also in proximity to the proposed improvements and could be affected by visual changes from the LPA:

- Tobias Avenue Park, 9122 Tobias Avenue, Panorama City: This park is adjacent to the project corridor on Van Nuys Boulevard to the north of Nordhoff Street.
- Pacoima Wash Greenway: This greenway is a future proposed project that crosses under the project corridor south of Van Nuys Boulevard and Arleta Avenue, and at San Fernando Road to the south of La Rue Street in San Fernando.
- Recreation Park (and San Fernando Regional Pool Facility), 208 Park Avenue, San Fernando: The park and pool facility are adjacent to the project corridor at the Metro-owned railroad right-of-way and Park Avenue.

The changes in aesthetic character from the LPA would be expected to be substantial in areas where sensitive viewers are located. Potential impacts on aesthetic character from the LPA are also addressed in more detail in Section 4.5 of the EIR. The visual impacts on sensitive viewers at local parklands or community facilities could be significant under CEQA.

Cumulative

Other present and reasonably foreseeable future projects in the area, including the cumulative projects in Table 2-3 of the FEIS/FEIR, could result in temporary impacts from construction activities, and impacts from past projects may also have resulted in temporary impacts. All cumulative impacts would be less than significant, except for potentially significant operational visual impacts.

The LPA would result in potentially significant operational visual impacts because it would introduce new vertical structures, such as the OCS that could obstruct views to and from parklands along the alignment. Past projects have resulted in a highly urbanized landscape along the project corridor from the construction of buildings, transportation infrastructure, and other structures that have affected scenic vistas, scenic resources, and visual character and quality. In addition, other present or reasonably foreseeable future projects in the area could further degrade the visual character and quality of the area, although that is unlikely since the related projects consist of infill development

projects that would not result in drastic changes to the existing visual character of the corridor or introduce new elements that would obstruct views. However, because impacts from the LPA would remain significant after implementation of mitigation measures, its contribution to cumulative visual impacts on parklands and community facilities during operation would be cumulatively considerable.

2.10.1 Mitigation Measures

The reader is referred to the following sections in these Findings for mitigation measures to reduce or avoid potential construction and operational impacts on parklands and community facilities: Section 2.1.1 (MM-TRA-1 to MM-TRA-3); Section 2.3.2 (MM-VIS- 1 to MM-VIS-5); Section 2.4.2 (MM-AQ-1 to MM-AQ-9); Section 2.5.2 (MM-2A to 2B, MM-NOI-3A to 3C; and Section 2.9.2 (MM-SS-1 to 23).

2.10.2 Findings

For the above impacts to Parklands, the following finding is made:

☒ Changes or alterations have been required in, or incorporated into, the project to avoid or substantially lessen the significant environmental effect as identified in the FEIS/FEIR.

☐ Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency

☒ Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the FEIS/FEIR.

The potential Parklands impacts due to the proposed project are found to be.

☒ Significant ☐ Not Significant

2.10.3 Rationale

The potential construction air quality impacts on parklands and community facilities would remain significant after implementation of proposed mitigation measures. The operational impacts of the LPA on emergency vehicle access and visual impacts on sensitive viewers would be significant after implementation of proposed mitigation measures. All other impacts would be less than significant.

2.10.4 References

Section 4.15 Parklands of the EIR describes the LPA's impacts on Parklands and identifies proposed feasible mitigation measures.

2.11 Historic, Archaeological and Paleontological Resources

2.11.1 Description of Significant Impacts

Archaeological Resources

Construction

The LPA would involve shallow excavation during platform construction in the median, station upgrades, and sidewalk widening. Construction activities could encounter and result in damage or destruction of previously undiscovered significant archaeological resources or human remains, which would be considered a significant impact. Archaeological sites 19-001124 and 19-002681 are located immediately adjacent to and within the footprint of the LPA. Even though neither resource is considered eligible for the California Register of Historic Places (CRHP) or an historical resource under CEQA, the immediate resource areas are still considered sensitive for containing previously undiscovered archaeological resources. Implementation of Mitigation Measure MM AR-2 would avoid or reduce potential impacts on archaeological resources, and Mitigation Measure MM AR-3 would avoid or reduce potential impacts on human remains.

Cumulative

Related and other proposed projects in the project study area, i.e., the San Fernando Valley, could require earthmoving activities during construction that could disturb or result in the destruction of archaeological resources, a potentially significant impact. If previously unknown resources are discovered during construction of the LPA, proposed measures would avoid or reduce potential impacts to archaeological resources or human remains to less-than-significant level. As a consequence, and because the related projects may also include mitigation measures to minimize or reduce potential impacts to archaeological resources, the LPA is not expected to result in or contribute to significant cumulative impacts on archaeological resources within the project study area.

Paleontological Resources

Construction

Fossils in valley areas are located subsurficially. If excavation of the LPA extends into native sediments, e.g., for sewer and water lines as well as for underground storage tanks at the proposed MSF, significant impacts/adverse effects to any paleontological resources that are encountered could occur.

Cumulative

Other related projects could require excavation to depths containing fossil bearing soils and could result in the destruction of fossil resources, a potentially significant impact. However, potential impacts to any paleontological resources that may be encountered during construction of the LPA

would be mitigated to a less-than-significant-level. Additionally, the related projects may also include mitigation measures that would minimize or reduce potential impacts to a less-than-significant level. Therefore, the LPA, after mitigation, would not contribute to any cumulative impacts to paleontological resources.

2.11.2 Mitigation Measures

Construction Mitigation Measures (Archaeological Resources)

If construction occurs in the immediate vicinity of Archaeological sites 19-001124 and 19-002681, the following measure is proposed to mitigate potential impacts.

MM-AR-1: Ground disturbing activities within site areas 19-001124 and 19-002681 and within a 50-foot buffer area around the sites shall be monitored by an Archaeological and Native American monitor. Construction related ground disturbance includes grading, excavation, trenching, and drilling. An Archaeological monitor and a Native American monitor shall examine all sediments disturbed during earth moving activities, including geotechnical drilling and environmental borings, if being conducted, prior to construction.

Archaeological monitoring for site CA-LAN-2681 shall be conducted as discussed in the project's Cultural Resources Monitoring Plan (CRMP). All archeological monitoring and any necessary identification, testing, and evaluation of resources identified during monitoring shall be conducted per the methods and procedures described in the CRMP for the project.

Standard methods of excavation such as grading and trenching shall be monitored by observation of the excavations as they occur.

Drilling of project features such as the overhead catenary system (OCS) result in earthen materials being delivered to the ground surface as loosened spoils. Materials to be examined by the Archaeological and Native American monitors are spoils removed from the drill holes while the drilling occurs. The monitors must be provided a safe location and opportunity to view spoils as they are being stored prior to being hauled away from the work area. Access of the monitors to the spoils material may be limited by safety concerns or by hazardous materials contamination.

If requested by an Archaeological or Native American monitor, opportunities shall be provided for the monitor, as part of their daily shift activities, to screen or rake spoils to determine if the spoils contain cultural materials.

Archaeological monitors are empowered to briefly halt construction if a discovery is made during standard excavation, such as grading and trenching, in the area of that discovery and a 50-foot buffer zone. If a Native American monitor wishes to halt construction, the monitor shall consult with the Archaeological monitor, who may then briefly halt construction. A request to halt activities by the Archaeological monitor should have no effect on ground disturbing activities outside the 50-foot buffer zone; however, spoil piles may not be removed until the monitor can examine them.

If an Archaeological or Native American monitor observes an isolated find, the Archaeological monitor shall temporarily halt construction in order to document the find. Documentation shall be completed by collecting a GPS point, photography, and recording information onto the daily monitoring log. All isolated prehistoric artifacts shall be collected. Diagnostic historic-era items shall be collected. Once an isolated item is documented, construction may resume.

MM-AR-2: If buried cultural materials are encountered in areas not actively being monitored during construction, the Contractor Project Foreman shall halt construction in a 50-foot radius around the discovery and shall immediately contact the LACMTA Metro Project Manager, LACMTA Metro Environmental Specialist, and Project Archaeologist.

Per the CRMP prepared for the proposed project, for any discovery of an archaeological feature, regardless of eligibility, the Metro Environmental Specialist shall notify all Consulting Parties identified for the project within 48 hours of any discovery. Notifications shall not be made for ubiquitous infrastructure elements such as modern utilities (cistern, electric, gas, sewer, and water supply lines), transportation infrastructure (bridge piers, buried roadways, and rail segments), sidewalks, and concrete rubble, fill, or waste.

MM-AR-3: In the event that human remains are encountered during construction, potentially destructive activities in the vicinity of the discovery shall be stopped and the provisions of California PRC § 5097.98 and HSC § 7050.5 shall be followed. The Archaeological monitor shall halt construction, establish a 50-foot buffer around the discovery, and shall contact the Metro Project Manager, Metro Environmental Specialist, and Project Archaeologist. The Metro Environmental Specialist shall notify the Los Angeles County Coroner on the same day of the discovery. and other Consulting Parties within 48 hours of discovery. Treatment of the remains and all subsequent actions shall be completed per the Cultural Resources Monitoring Plan (CRMP).

Construction Mitigation Measures (Paleontological Resources)

MM-PR-1: Metro shall retain the services of a qualified paleontologist (minimum of graduate degree, 10 years of experience as a principal investigator, and specialty in vertebrate paleontology) to oversee execution of this mitigation measure. Metro's qualified principal paleontologist shall then develop a Paleontological Resources Monitoring and Mitigation Plan (PRMMP) acceptable to the collections manager of the Vertebrate Paleontology Section of the Natural History Museum of Los Angeles County. Metro will implement the PRMMP during construction. The PRMMP will clearly demarcate the areas to be monitored and specify criteria. At the completion of paleontological monitoring for the proposed project, a paleontological resource monitoring report will be prepared and submitted to the Natural History Museum of Los Angeles County to document the results of the monitoring activities and summarize the results of any paleontological resources encountered.

The PRMMP shall include specifications for processing, stabilizing, identifying, and cataloging any fossils recovered as part of the proposed project. Metro's qualified principal paleontologist shall prepare a report detailing the paleontological resources recovered, their significance, and arrangements made for their curation at the conclusion of the monitoring effort.

MM-PR-2: Prior to the start of construction a qualified Principal Paleontologist shall prepare a Paleontological Mitigation Plan (PMP) that includes the following requirements:

- All project personnel involved in ground-disturbing activities shall receive paleontological resources awareness training before beginning work.

- Excavations, excluding drilling, deeper than 8 feet below the current surface in the Quaternary alluvium shall be periodically spot checked to determine when older sediments conducive to fossil preservation are encountered. Once the paleontologically sensitive older alluvium is reached, a qualified paleontologist shall perform full-time monitoring of construction. Should sediments in a particular area be determined by the paleontologist to be unsuitable for fossil preservation, monitoring shall be suspended in those areas. A paleontologist shall be available to be on call to respond to any unanticipated discoveries and may adjust monitoring based on the construction plans and field visits.

- Sediment samples from the Quaternary older alluvium shall be collected and screened for microfossils.

- Recovered specimens shall be stabilized and prepared to the point of identification. Specimens shall be identified to the lowest taxonomic level possible and transferred to an accredited repository for curation along with all associated field and lab data.

- Upon completion of project excavation, a Paleontological Mitigation Report (PMR) documenting compliance shall be prepared and submitted to the Lead Agency under CEQA.

2.11.3 Findings

For the above impacts to Historical, Archaeological, and Paleontological Resources, the following finding is made:

☒ Changes or alterations have been required in, or incorporated into, the project to avoid or substantially lessen the significant environmental effect as identified in the FEIS/FEIR.

☐ Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency

☐ Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the FEIS/FEIR.

The potential Historical, Archaeological, and Paleontological Resources due to the proposed project are found to be.

☐ Significant ☒ Not Significant

2.11.4 Rationale

Potential impacts to archaeological or paleontological resources that may be encountered during construction would be reduced to less than significant with implementation of the proposed mitigation measures.

2.11.5 References

Section 4.16 of the EIR describes the LPA's archaeological and paleontological resources impacts and identifies proposed feasible mitigation measures.

3 Alternatives

Section 15126.6 of the CEQA Guidelines requires an evaluation of the comparative effects of a reasonable range of alternatives to the project that would feasibly attain most of the project's basic objectives and would avoid or substantially lessen any of the significant impacts of the project. A feasible alternative is one that can be accomplished successfully in a reasonable period of time, taking into consideration economic, legal, social, and technological factors. The range of alternatives is governed by the "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasonable choice. As discussed in Section 1.2 above, the Metro Board of Directors formally identified a modified version of Alternative 4 described in the Draft EIS/EIR as the Locally Preferred Alternative (LPA). This alternative is identified as Alternative 4 Modified: At-Grade LRT in the FEIS/FEIR. Chapter 2, Project Description/Alternatives Considered, of the FEIS/FEIR describes the LPA in detail and also describes the four build alternatives, a Transportation Systems Management Alternative, and a No-Build Alternative that were considered in the Draft EIS/EIR. Chapter 2 also discusses alternatives that were eliminated from detailed consideration in the EIR.

3.1.1 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 related transportation 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 Measure M, as well as projects specified in the current constrained element of the Metro LRTP and the 2016 Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS).

Although the No-Build Alternative would result in none of the significant impacts that could occur under the LPA (or IOS), it would not fulfill the objectives of the project to: improve mobility, enhance transit accessibility/connectivity for local residents to local and regional destinations, provide more reliable transit service; increase transit service efficiency, provide additional transit options in an area with a large transit-dependent population, and encourage modal shift to improve air quality and reduce greenhouse gas emissions. In addition to not achieving any of the objectives that could be achieved by the LPA (and IOS), under the No-Build Alternative, traffic congestion would continue to

increase adversely affecting traffic speeds for motorists and buses and resulting in additional pollutant emissions.

3.1.2 TSM Alternative

The transportation system management (TSM) Alternative would increase the number and frequency of buses compared with the No-Build Alternative but would not provide improvements in travel time along the corridor (i.e., faster service). However, the build alternatives would improve transit service efficiency (i.e., speeds and passenger throughput) in the project study area compared with the TSM Alternative because of the dedicated guideways or lanes and increased capacity (e.g., LRT cars can carry more passengers than buses). The TSM Alternative would provide more frequent bus service compared with existing conditions but would not separate buses from mixed-flow traffic conditions. Although the TSM Alternative has the lowest capital costs compared with the build alternatives, it has the longest travel time and the lowest number of new linked trips.

Although the TSM Alternative would result in none of the significant impacts that could occur under the LPA (or IOS,) the minor improvements under this alternative would provide limited benefits and would not fulfill the project objectives to the extent the LPA would. Specifically, the TSM Alternative would result in only minor improvements to mobility and accessibility within the project area. It would have minor beneficial effects on transit service reliability and efficiency. The TSM Alternative would not provide additional transit options in an area with a large transit-dependent population and would likely not result in modal shift to an appreciable degree that would noticeably improve air quality and reduce greenhouse gas emissions.

3.1.3 Alternative 1 – Curb-Running BRT

Under the Curb-Running BRT Alternative, 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 would be converted to dedicated bus lanes. This alternative would be similar to the Metro Wilshire BRT Project with a dedicated bus lane that could operate 24-hours a day or only during peak periods. The hours during which the curb lane would be used as a dedicated BRT lane may be limited to the period extending from 7:00 a.m. to 7:00 p.m. (further refinement of the operating hours and days for the Curb-Running BRT could occur, if necessary, based on passenger demand and community input after operation of this alternative commences). The existing asphalt lane along Van Nuys Boulevard, Truman Street, and San Fernando Road would be replaced with a concrete lane; similar to what was done for the Wilshire BRT Project. The lanes would be dedicated curb-running bus lanes for Metro Rapid Line 744, which replaced 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. Metro Local Line 233 would continue north on Van Nuys Boulevard to Lakeview Terrace. These improvements would result in an improved Metro Rapid Line 761 (now 744; hereafter referred to as 744X) and an improved Metro Local Line 233 (hereafter referred to as 233X).

The buses operating under the Curb-Running BRT Alternative would be similar to existing Metro high-capacity, articulated 60-foot buses. 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.

Bicycle parking would be provided at or near Metro stations, as required by the Metro BRT Design Criteria. On Van Nuys Boulevard between the Metro Orange Line and San Fernando Road, with one exception (between Parthenia Street and Roscoe Boulevard), the curbside lane would be 12 feet wide or greater. The curb lane would be restricted to buses and bicyclists, with other vehicles allowed in the lane only for right-turns.

The existing bike lanes on Van Nuys Boulevard north of Parthenia Street would be removed under this alternative.

On Van Nuys Boulevard between Parthenia Street and Roscoe Boulevard, the curbside lane would be 11 feet wide. Parking is currently prohibited on the segment. A permanent curbside bus lane would be provided on this segment so that bicyclists would share the curbside lane only with buses and right-turning vehicles.

This alternative would fulfill most of the project objectives but not to the same extent as the LPA (or IOS). Under this alternative, the travel time for the curb-running BRT would be greater than would occur under the LPA, and there would be fewer daily boardings than would occur under the LPA. Therefore, this alternative would not increase transit service efficiency as much as would occur under the LPA. As a consequence, it would not result in as great a mode shift as could occur under the LPA and therefore, would not result in the greenhouse gas emission reductions that could occur under the LPA (or IOS).

3.1.4 Alternative 2 – Median-Running BRT

The Median-Running BRT Alternative would provide approximately 6.7 miles of dedicated median-running bus lanes between San Fernando Road and the Metro Orange Line and have operational standards similar to the Metro Orange Line. Similar to Alternative 1, the minor construction under this alternative would include removing the existing asphalt lane and replacing it with a concrete lane, similar to what was done for the Wilshire BRT Project. 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.

Articulated 60-foot buses, similar to those under the Curb-Running BRT Alternative would be operated. 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, similar to existing Metro Rapid buses, to continue to allow for improved operations and on-time performance.

Under this alternative, all curbside parking would be prohibited along the entire extent of Van Nuys Boulevard from the Van Nuys Metro Orange Line Station to San Fernando Road.

Left turns from Van Nuys Boulevard onto cross streets would be maintained at most of the currently signalized intersections and prohibited at all unsignalized intersections. The dual left-turn lanes on

northbound and southbound Van Nuys Boulevard at Sherman Way and at Roscoe Boulevard would be reduced to single left-turn lanes. Several left-turns in the Van Nuys Civic Center, between Calvert and Hartland Streets, would be prohibited to accommodate median bus stop platforms.

All movements across the median dedicated guideway along Van Nuys Boulevard in-between signalized cross streets would be prohibited. This includes left turns from Van Nuys Boulevard at unsignalized intersections and private driveways, as well as left turns and through traffic from the side streets.

On Van Nuys Boulevard between the Van Nuys Metro Orange Line Station and San Fernando Road, the curbside lanes typically would be 11 feet wide. Thus, motorists in the curbside lane would need to shift to the left to pass a bicyclist. The existing bike lanes extending north on Van Nuys Boulevard approximately two miles from Parthenia Street to Beachy Avenue would be removed and would not be replaced under this alternative. However, bicycle parking would be provided at or near Metro stations, as required by the Metro BRT Design Criteria.

All existing signal-controlled crosswalks would be maintained. However, all other pedestrian crossings on Van Nuys Boulevard at unsignalized intersections would be prohibited.

Bus patrons would be guided to signal-controlled crosswalks between curbside local bus stops and median BRT bus stops by railings on the backside of median bus stop platforms.

Similar to Alternative 2, Alternative 3 would fulfill most of the project objectives but not to the same extent as the LPA or IOS. Under this alternative, the travel time for the median-running BRT would be greater than would occur under the LPA and there would be fewer daily boardings than would occur under the LPA. Therefore, this alternative would not increase transit service efficiency as much as would occur under the LPA. As a consequence, it would not result in as great a mode shift as could occur under the LPA and therefore, would not result in the greenhouse gas emission reductions that could occur under the LPA (or IOS).

3.1.5 Alternative 3 – Median-Running Low-Floor LRT/Tram

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. The Low-Floor LRT/Tram would serve the Cities of San Fernando and Los Angeles, including Pacoima, Arleta, Panorama City, and Van Nuys, with 28 stations.

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 the TPSSs units and the MSF.

Low-Floor LRT/Tram vehicles may be similar to the streetcar rail vehicles currently used in Portland, Oregon, or may resemble the multi-unit low-floor light rail vehicles that are also used in Portland, as well as San Diego and many other US cities. It is assumed the Low-Floor LRT/Tram trains would consist of three rail cars (each 90-feet long) that would be connected to form a 270-foot-long train. Although Low-Floor LRT/Tram vehicles could operate at speeds of up to 60 miles

The typical Low-Floor LRT/Tram station platform would be a minimum of 12 feet wide for a side platform station to a minimum of 16 feet wide for a center platform station, 270 feet long. Access to the Low-Floor LRT/Tram station platforms would be from crosswalks.

The new Low-Floor LRT/Tram MSF would accommodate both operational and administrative functions. The MSF would accommodate all levels of vehicle service and maintenance (i.e., progressive maintenance, scheduled maintenance, unscheduled repairs, warrantee service, and limited heavy maintenance) in addition to storage space for vehicles. The number of Low-Floor LRT/Tram vehicles needed under this alternative would be 46.

The proposed Low-Floor LRT/Tram would operate with 4-minute peak and 8-minute off-peak headways. Metro Rapid Line 744S would operate with 6-minute peak and 12-minute off-peak headways, while Metro Local Line 233S would operate with 8-minute peak and 16-minute off peak headways.

Based on Metro's Operations Plan for the eastern San Fernando Valley Transit Corridor Project, the Low-Floor LRT/Tram Alternative would assume a travel speed of 35 MPH, which is similar to the Median-Running BRT Alternative, with speed improvements of 18 percent during peak hours/peak direction and 15 percent during off-peak hours.

All curbside parking would be prohibited along the alignment on Van Nuys Boulevard and on San Fernando Road under DEIS/DEIR Alternative 3.

Most of the left turns would be prohibited from San Fernando Road through the City of San Fernando between the Sylmar/San Fernando Metrolink Station and Wolfskill Street.

All existing turning movements would be maintained on San Fernando Road between Wolfskill Street and Van Nuys Boulevard, where the Low-Floor LRT/Tram would share travel lanes with motor vehicles.

Left turns from Van Nuys Boulevard onto cross streets would be maintained at most of the currently signalized intersections where the Low-Floor LRT/Tram would be running in the medians. However, all vehicle movements across the median at currently unsignalized intersections would be prohibited. This would include left turns from Van Nuys Boulevard as well as left turns and through traffic from minor side streets and private driveways. Motorists who desire to make a left turn onto an unsignalized cross street or into a driveway would have to make a U-turn at a signalized left-turn location or choose a route that would allow them to use a signalized cross street.

On Van Nuys Boulevard between San Fernando Road and the Metro Orange Line, the curbside lanes typically would be 11 feet wide. The existing bike lanes extending approximately 2 miles north on Van Nuys Boulevard from Parthenia Street to Beachy Avenue and from Laurel Canyon Boulevard to San Fernando Road would be removed, but the existing Class I bike path adjacent to San Fernando

Road would remain in place. Class I bikeways, also known as bike paths or shared-use paths, are facilities with exclusive right of way for bicyclists and pedestrians, away from the roadway and with cross flows by motor traffic minimized. In addition, bicycle parking would be provided at or near Metro stations, as feasible.

Alternative 3 would fulfill most of the project objectives but not to the same extent as the LPA. Since this alternative includes more stations than any of the rail alternatives, it would improve transit accessibility to the greatest extent but it would result in increased travel time compared to the LPA. There would also be fewer daily boardings than would occur under the LPA. Therefore, this alternative would not increase transit service efficiency as much as would occur under the LPA. As a consequence, it would not result in as great a mode shift as could occur under the LPA and therefore, would not result in the greenhouse gas emission reductions that could occur under the LPA (or IOS).

3.1.6 Alternative 4 – Median-Running LRT

Under this alternative, the LRT would be powered by overhead lines and would travel 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. The distance is approximately 2.5 miles. Then it would travel along Van Nuys Boulevard from San Fernando Road to the Van Nuys Metro Orange Line Station; a distance of approximately 6.7 miles. The route of the LRT Alternative is a total of approximately 9.2 miles. As described in the DEIS/DEIR, Alternative 4 includes a subway segment from just north of Parthenia Street south to Hart Street.

LRT vehicles would be similar to those currently used throughout the existing Metro LRT system. The LRT train sets would be configured with a driver's cab at either end, similar to other Metro light rail trains, allowing them to run in either direction without the need to turn around at the termini.

The Alternative 4 LRT alignment would have two tracks and be fully separated from automobile traffic, except at controlled grade crossings. The LRT Alternative would operate along the following route:

Along and just east of San Fernando Road, from the Sylmar/San Fernando Metrolink Station south to Van Nuys Boulevard, the alignment would be located within the existing Metro-owned right-of-way currently used by Metrolink and the Union Pacific Railroad. Metrolink and the Union Pacific Railroad would continue to use a separate dedicated track;

From the intersection of San Fernando Road and Van Nuys Boulevard to the Metro Orange Line, the LRT Alternative would operate in a semi-exclusive right-of-way in what is currently the median of Van Nuys Boulevard; within this segment, the LRT would be underground beneath Van Nuys Boulevard from just north of Parthenia Street south to Hart Street. The train would operate at prevailing traffic speeds and would be controlled by train signals that would coordinate with the traffic signals.

Stations would be constructed at approximately 3/4-mile intervals along the entire route. There would be 14 stations, three of which would be underground. The three underground stations would be located near Sherman Way, the Van Nuys Metrolink Station, and Roscoe Boulevard.

All local curbside bus stops along Van Nuys Boulevard north of the Metro Orange Line would remain in their current location. Along San Fernando Road and Truman Street, the existing bus stops would also remain in their current locations.

The proposed stations would have designs consistent with the MRDC, including directive and standard drawings. Stations would be ADA compliant, including compliance with the requirements pertaining to rail platforms, rail station signs, public address systems, clocks, escalators, and track crossings.

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.

The proposed LRT would operate with 6-minute peak and 12-minute off-peak headways when it opens and is projected to operate at 5-minute peak and 10-minute off-peak once ridership begins to increase.

All curbside parking would be prohibited along the surface-running segments of the LRT Alternative on Van Nuys Boulevard.

This alternative would maintain two travel lanes in each direction, while traveling along Van Nuys Boulevard.

Left turns from Van Nuys Boulevard onto cross streets would be maintained at most of the currently signalized intersections where the LRT would be running in the median. However, all vehicle movements across the median at currently unsignalized intersections would be prohibited. This would include left turns from Van Nuys Boulevard as well as left turns and through traffic from un-signalized side streets and private driveways. Motorists who desire to make a left turn onto an unsignalized cross street or into a driveway would have to make a U-turn at a signalized left-turn location or choose a route that would allow them to use a signalized cross street.

Bicycle parking would be provided at or near Metro stations, as feasible. The existing bike lanes extending approximately 2 miles north on Van Nuys Boulevard from Parthenia Street to Beachy Avenue and from Laurel Canyon Boulevard to San Fernando Road would be removed.

The City of Los Angeles constructed a bicycle path within Metro's railroad right-of-way parallel to San Fernando Road. This existing Class I bike path would remain in place except in the City of San Fernando where the bike path would be relocated east in order to accommodate the relocated single Metrolink/UPRR track. The right-of-way is sufficiently wide enough to allow the bicycle path to remain alongside a pair of LRT tracks and relocated track for Metrolink and Union Pacific Railroad. At the point where the LRT Alternative crosses the bicycle path, near the intersection of Pinney Street and San Fernando Road, a signalized grade crossing would be provided.

There would be a pedestrian bridge or underground access at the Sylmar/San Fernando Metrolink Station from the LRT platform to the Metrolink platform.

All current crosswalks at signal-controlled intersections would be maintained. Between the signalized intersections, a barrier would be installed to prevent mid-block pedestrian crossings, as is Metro's current practice on its median-running LRT lines. Pedestrians would be required to walk to a signalized location to cross Van Nuys Boulevard. LRT passengers would reach the median station platforms from crosswalks at signalized intersections.

Left turns into and out of driveways would be blocked by a median barrier under the LRT Alternative. Only right turns into and out of cross streets and driveways would be allowed.

This alternative, like the LPA, would fulfill all of the project objectives. Additionally, since Alternative 4 includes a subway segment, it would result in slightly less travel time and slightly more transit boardings than the LPA. However, construction of the subway would result in greater construction impacts along that segment compared to the LPA (or IOS). This alternative would also take longer to construct and the construction costs would be substantially higher than any of the other build alternatives.

3.2 Maintenance and Storage Facility (MSF) Sites

The LPA (and IOS) would include construction of a new MSF, which would provide secure storage of the LRT vehicles when they are not in operation, and regular light maintenance to keep them clean and in good operating condition as well as heavy maintenance. Three sites (Options A, B, and C) identified below were evaluated in the DEIS/DEIR.

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

MSF Option B, was identified as the locally preferred site by the Metro Board. The MSF Option B site, which would be approximately 25 acres in size, would be located on the west side of Van Nuys Boulevard and would be bounded by Keswick Street on the south, Raymer Street on the east and north, and the Pacoima Wash on the west.

MSF Option A was eliminated from consideration because of significant public opposition by a large number of business and property owners that would be displaced by construction of an MSF on the site.

MSF Option B was identified as the preferred site because of its central location along the alignment, public support for the site, and because sites A and C would result in potentially greater impacts on nearby sensitive residential uses than would occur with implementation of MSF Option B.

3.3 Alternatives Considered but Not Analyzed in the EIR

Chapter 2 also discussed several alternatives that were considered but not carried forward. These alternatives were considered by the lead agency but rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. Alternative alignments that were identified and considered but subsequently eliminated from further review and not carried forward in the EIR include Sepulveda Boulevard, I-210 Freeway Terminus Point, and Van Nuys Boulevard between the Metro Orange Line and Ventura Boulevard. These alternatives were not carried forward into the EIR because they would not avoid or substantially lessen the proposed Project's significant impacts and/or they did not meet the project objectives. A detailed description of these alternatives and an explanation of why they were not carried forward are included in Chapter 2 of the FEIS/FEIR.

3.4 Environmentally Superior Alternative

Section 15126.6 of the CEQA Guidelines requires that an "environmentally superior" alternative be identified and the reasons for such a selection be disclosed. In general, the environmentally superior alternative is the alternative that would be expected to generate the least amount of adverse impacts. In this case, the No Project Alternative would result in fewer impacts on the existing environment. However, it should also be recognized that there could be adverse transportation, air quality, and greenhouse gas environmental consequences from making no improvements to transit service along the project corridor, and none of the mobility and connectivity benefits for the community that could occur under the proposed build alternatives would occur under the No-Build Alternative.

Pursuant to CEQA regulations (see State CEQA Guidelines Section 15126.6(e)(2), when the No-Project (aka No-Build) Alternative is the environmentally superior alternative, then the EIR shall also identify an environmentally superior alternative among the other alternatives. To determine which of the other alternatives would be environmentally superior, the analysis focuses on those impacts identified as adverse and/or significant and unavoidable, even after mitigation.

As shown in Table 1 below, the TSM Alternative would not result in any significant impacts/adverse effects after mitigation, as opposed to all five build alternatives, which would result in significant impacts/adverse effects after implementation of proposed mitigation measures. The TSM Alternative would, therefore, be the environmentally superior alternative. However, as shown in Table 1, the TSM Alternative would meet only three of the five primary project objectives and to a much more limited extent for those three objectives than under the build alternatives. Alternatives 1 through 3 would meet four of the five project objectives; Alternatives 4 and the LPA would meet all five of the project objectives. Among Alternatives 1 through 4 and the LPA, Alternatives 1 and 2 would result in unavoidable significant adverse impacts in 6 of the 12 impact categories; Alternative 3 would result in unavoidable significant adverse impacts in 8 categories, and Alternative 4 and the LPA would result in unavoidable significant adverse impacts in 7 of the 12 environmental impact categories.

Alternative 1 would be the environmentally superior alternative because although it would result in significant impacts in the same number of categories as Alternative 2, those impacts would be less extensive. However, it should be noted that Alternative 1 would not provide the mobility and environmental benefits that could occur under the LPA, which would result in substantially more transit boardings, significantly less travel time, and greater reductions in vehicle miles traveled and greenhouse gas emissions than Alternative 1. Therefore, Alternative 1 would not fulfill the project objectives to the extent that the LPA would.

Table 1: Alternatives Evaluation

Criteria	No Build	TSM	Alt 1: Curb-Running BRT	Alt 2: Median-Running BRT	Alt 3: Median-Running Low-Floor LRT/Tram	Alt 4: Median-Running LRT	LPA (Alt. 4 Modified: At-Grade LRT)
Project Objectives							
Provide new service and/or infrastructure that improves passenger mobility and connectivity to regional activity centers.	No	Yes	Yes	Yes	Yes	Yes	Yes
Provide more reliable transit service.	No	Yes	Yes	Yes	Yes	Yes	Yes
Increase transit service efficiency (speeds and passenger throughput) in the project study area.	No	No	Yes	Yes	Yes	Yes	Yes
Provide additional transit options in an area with a large transit-dependent population.	No	Yes	Yes	Yes	Yes	Yes	Yes
Encourage modal shift thereby improving air quality and reducing greenhouse gas emissions in the project study area.	No	No	No	No	No	Yes	Yes
Alternative Features							
Travel time (minutes)*	35.7	35.7	32.2	29.2	34.3	25.4	25.9
Capital costs (millions of $ [2018])	$ 0	$39.4	$329.3	$450.2	$1,456	$2,995–$3,220	$1,900-$2,200
Alternative length (miles)	N/A	N/A	9.2	9.2	9.2	9.2	9.2
New stations	0	0	18	17	28	14	14
Significant Environmental Impacts Remaining after Mitigation?							
Transportation, Transit, Circulation, and Parking	No	No	Yes	Yes	Yes	Yes	Yes
Land Use	No	No	Yes	Yes	Yes	Yes	Yes
Visual Quality and Aesthetics	No	No	No	No	Yes	Yes	Yes

Criteria	No Build	TSM	Alt 1: Curb-Running BRT	Alt 2: Median-Running BRT	Alt 3: Median-Running Low-Floor LRT/Tram	Alt 4: Median-Running LRT	LPA (Alt. 4 Modified: At-Grade LRT)
Air Quality	No	No	Yes	Yes	Yes	Yes	Yes
Greenhouse Gas Emissions	No	No	No	No	Yes	No	No
Noise and Vibration	No	No	Yes	Yes	Yes	Yes	Yes
Geology, Soils, and Seismicity	No	No	No	No	No	No	No
Hazardous Waste and Materials	No	No	No	No	No	No	No
Ecosystems and Biological Resources	No	No	No	No	No	No	No
Safety and Security	No	No	Yes	Yes	Yes	Yes	Yes
Parklands and Community Facilities	No	No	Yes	Yes	Yes	Yes	Yes
Historic, Archaeological, and Paleontological Resources	No	No	No	No	No	No	No

* AM peak northbound travel time from Metro Orange Line to Sylmar Metrolink station.

Source: KOA and ICF, 2019.

3.5 Statement of Overriding Considerations

The LPA would result in unavoidable significant adverse impacts after mitigation in the following impact categories: Transportation, Transit, Circulation, and Parking; Land Use; Visual Quality and Aesthetics; Air Quality; Noise and Vibration; Safety and Security; and Parklands and Community Facilities.

The benefits of the project are listed below. Any one of the overriding considerations of economic, social, and environmental benefits individually would be sufficient to outweigh the adverse environmental impacts of the proposed project and justify the adoption and certification of the FEIS/FEIR.

1. The LPA successfully meets all of the project objectives, which reflect Metro's mission to meet public transportation and mobility needs for transit infrastructure while also being a responsible steward of the environment and considerate of affected agencies and community members when planning a fiscally sound project.
2. The LPA provides more reliable operations and connections between key transit hubs and routes throughout the immediate and exterior study area.
3. Implementation of the LPA would enhance transit accessibility/connectivity to a multitude of local and regional destinations, and the greater Los Angeles County regional transit network by connecting to the Sylmar/San Fernando Metrolink Station in the north and the Metro Orange Line Station in the south. New links between the LPA and other transit lines would improve transit travel time for residents throughout the County and increase transit service efficiency by improving public transportation travel speeds and passenger throughput.
4. The implementation of the LPA would provide additional transit options in a largely transit-dependent area, which may indirectly contribute to the upwards social mobility of residents in the region. Because of the centralized trip patterns, transit accessibility and connectivity are integral to project study area resident travel needs (35 percent are transit-dependent).
5. The LPA is expected to decrease daily Vehicle Miles Traveled (VMT) under the future year 2040 with project conditions, by 78,131 miles compared to the No-Build Alternative by promoting modal shift to transit from private vehicles within the eastern San Fernando Valley, which will reduce energy consumption and lower emissions of some air pollutants, including greenhouse gas emissions and other pollutants that currently contribute to our regional air quality problems, resulting in beneficial air quality and climate change effects.
6. The LPA would address the increasing travel demand in the region.

Improved mobility through the implementation of the LPA has the potential to boost economic development and improve social justice by providing better access to employment, educational and health facilities, and activity centers. Accordingly, the Los Angeles County Metropolitan Transportation Authority (Metro) hereby concludes that the proposed LPA's benefits outweigh and override its unavoidable significant impacts for the reasons stated above. Metro has reached this decision after having done all of the following: (1) adopted all feasible mitigation measures, (2) rejected infeasible alternatives to the project, (3) rejected alternatives that would not feasibly attain

most of the project objectives, (4) recognized all significant, unavoidable impacts and rejected alternatives that would not avoid or substantially lessen any of the significant effects of the project, and (5) balanced the benefits of the proposed project against its significant and unavoidable impacts.

ATTACHMENT C

EAST SAN FERNANDO VALLEY TRANSIT CORRIDOR PROJECT

MITIGATION MONITORING AND REPORTING PROGRAM

PREPARED FOR:

Los Angeles County Metropolitan Transportation Authority

OCTOBER 2020

Mitigation Monitoring and Reporting Program

CEQA requires agencies that adopt an Environmental Impact Report (EIR) or Mitigated Negative Declaration to take affirmative steps to determine that approved mitigation measures are implemented after project approval.

As part of CEQA's environmental review procedures, Section 21081.6 requires a public agency to adopt a reporting or monitoring program for assessing and ensuring the efficacy of any mitigation measures applied to a proposed project. Specifically, the lead or responsible agency must adopt a reporting or monitoring program for mitigation measures incorporated into a project or imposed as conditions of approval. The program must be designed to ensure compliance during project implementation. As stated in Public Resources Code Section 21081.6 (a) (1):

> The public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation. For those changes which have been required or incorporated into the project at the request of a responsible agency or a public agency having jurisdiction by law over natural resources affected by the project, that agency shall, if so requested by the lead agency or a responsible agency, prepare and submit a proposed reporting or monitoring program.

CEQA Section 15097 provides general guidelines for implementing mitigation monitoring and reporting programs (MMRPs). Specific reporting and/or monitoring requirements, which are to be enforced during project implementation, shall be defined prior to final approval of the proposal by the responsible decision maker(s).

In response to established CEQA requirements and those of Public Resources Code Section 21000 et seq., this MMRP for the proposed East San Fernando Valley Transit Corridor Project shall be submitted for adoption by the Board of Directors of the Los Angeles County Metropolitan Transportation Authority (Metro) prior to completion of the environmental review process.

Metro, as the project proponent and lead agency, shall be responsible for assuring full compliance with the provisions of this program. The Chief Executive Officer (CEO) of Metro may delegate duties and responsibilities to Metro staff, applicants, and consultants as necessary. The CEO shall also ensure that monitoring reports are filed on a timely basis and, when identified, that program violations are corrected. Progress toward completion of the required mitigation program, or violations thereof, shall be reported at prescribed intervals to the CEO. The reports shall be prepared using approved forms or an acceptable format. These reports will be available for public review at any time.

This MMRP includes the mitigation measure(s) identified in the Final EIR and for each mitigation measure, the following information is provided:

- Party Responsible for Implementation of the Mitigation Measure;
- Implementation Phase;
- Party Responsible for Monitoring Implementation;
- Monitoring Activity;
- Monitoring Period;

- Monitoring Frequency; and
- Outside Agency Coordination.

The table below presents the MMRP for the proposed project.

Mitigation Monitoring and Reporting Program

Mitigation Measures	Party Responsible for Implementation	Phase	Party Responsible for Monitoring	Monitoring Activity/Period/Frequency	Outside Agency/ Organization Coordination
Transportation, Transit, Circulation, and Parking					
MM-TRA-1: The Traffic Management Plan (TMP) shall require Metro to communicate closures and information on any changes to bus service to local transit agencies in advance and develop detours as appropriate. Bus stops within work areas shall be relocated, with warning signs posted in advance of the closure, and warnings and alternate stop notifications posted during the extent of the closure.	Los Angeles County Metropolitan Transportation Authority, construction contractor	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check construction specifications during preparation of construction bid packages to ensure a TMP and the requirements listed as part of MM-TRAF-1 are specified. 2. Check once during pre-construction to confirm that a TMP has been prepared. 3. Periodically inspect construction sites, as necessary, to confirm the TMP measures have been implemented.	Local transit agencies
MM-TRA-2: The Traffic Management Plan shall include the following typical measures, and others as appropriate: • Schedule a majority of construction-related travel (i.e., deliveries, hauling, and worker trips) during the off-peak hours. • Develop detour routes to facilitate traffic movement through construction zones without significantly increasing cut-through traffic in adjacent residential areas. • Where feasible, temporarily restripe roadways including turning lanes, through lanes, and parking lanes at the affected intersections to maximize the vehicular capacity at those locations affected by construction closures. • Where feasible, temporarily remove on-street parking to maximize the vehicular capacity at those locations affected by construction closures. In these areas where street parking is temporarily removed in front of businesses, the contractor shall provide wayfinding to other nearby parking lots or temporary	Los Angeles County Metropolitan Transportation Authority, construction contractor	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check construction specifications during preparation of construction bid packages to ensure all measures listed as part of MM-TRAF-2 are specified. 2. Check once during pre-construction to confirm that a TMP has been prepared. 3. Periodically inspect construction sites, as necessary, to confirm project traffic control measures have been implemented, as practicable.	Local jurisdictions school districts, and business owners; Caltrans;

Mitigation Measures	Party Responsible for Implementation	Phase	Party Responsible for Monitoring	Monitoring Activity/Period/Frequency	Outside Agency/ Organization Coordination
lots, with any temporary parking secured well in advance of parking being removed in the affected area. • Place station traffic control officers at major intersections during peak hours to minimize delays related to construction activities; • Assign a Construction Relations team inclusive of a manager, senior officers, and social media strategist to develop and implement the Metro Board's adopted Construction Relations model. The team will conduct the outreach program to inform the general public about the construction process, planned roadway closures, and anticipated mitigations through community briefings in public meeting spaces and use of signage (banners, etc.). • Develop and implement a program with business owners to minimize effects to businesses during construction activities, including but not limited to signage, Eat, Shop, Play, and promotional programs. • Consult and seek input on the designation and identification of haul routes and hours of operation for trucks with the local jurisdictions, school districts and Caltrans. The selected routes should minimize noise, vibration, and other effects. • To the extent practical, maintain traffic lanes in both directions, particularly during the morning and afternoon peak hours. • Maintain access to adjacent businesses and schools (including passenger loading areas for parents dropping off					

Mitigation Measures	Party Responsible for Implementation	Phase	Party Responsible for Monitoring	Monitoring Activity/Period/Frequency	Outside Agency/ Organization Coordination
students) via existing or temporary driveways or loading zones throughout the construction period. • Coordinate potential road closures and detour routes and other construction activities that could adversely affect vehicle routes in the immediate vicinity of local schools with local school districts. • Install and maintain appropriate traffic controls (signs and signals) to ensure vehicular safety.					
MM-TRA-3: To ensure potential impacts on pedestrian and bicycle facilities are minimized to the extent feasible, the Traffic Management Plan (TMP) and Traffic Control Plan (TCP) shall include the following: • Bicycle detour signs shall be provided, as appropriate, to route bicyclists away from detour areas with minimal-width travel lanes and onto parallel roadways. • Sidewalk closure and pedestrian route detour signs shall be provided, as appropriate, that safely route pedestrians around work areas where sidewalks are closed for safety reasons or for specific construction work within the sidewalk area. In addition, the project contractor shall ensure appropriate "Open during Construction," wayfinding, and promotional signage for businesses affected by sidewalk closures is provided and access to these businesses is maintained.	Los Angeles County Metropolitan Transportation Authority, construction contractor	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check construction specifications during preparation of construction bid packages to ensure that the TMP and TCP requirements in MM-TRA-3 are specified. 2. Periodically inspect construction sites, as necessary, to confirm that pedestrian and bicycle measures in TMP and TCP are being implemented, as appropriate.	None
MM-TRA-4: During the Preliminary Engineering phase of the project, Metro will work with the Cities of Los Angeles and San	Los Angeles County Metropolitan	Final Design, Construction	Los Angeles County Metropolitan	1. Check as necessary during final design to ensure coordination occurs with the Cities of Los Angeles and San Fernando	Cities of Los Angeles and San Fernando

Mitigation Measures	Party Responsible for Implementation	Phase	Party Responsible for Monitoring	Monitoring Activity/Period/Frequency	Outside Agency/ Organization Coordination
Fernando to synchronize and coordinate signal timing and to optimize changes in roadway striping to minimize potential operational traffic impacts and hazards to the extent feasible.	Transportation Authority		Transportation Authority	to minimize potential operational traffic impacts and hazards as specified in MM-TRA-4. 2. Check plans periodically as necessary to ensure any proposed physical improvements to minimize operational traffic impacts including signal timing are incorporated in project plans. 3. Check periodically during construction to ensure improvements are implemented in accordance with plans.	
MM-TRA-5: Additional visual enhancements, such as high-visibility crosswalks that meet current LADOT design standards, to the existing crosswalks at each proposed station location shall be implemented to further improve pedestrian circulation.	Los Angeles County Metropolitan Transportation Authority, Contractor	Final Design, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check plans as necessary during final design to ensure proposed crosswalk improvements are included. 2. Periodically check construction/project site, as necessary, to confirm that additional visual enhancements are implemented in accordance with plans.	LADOT
MM-TRA-6: To further reduce potential adverse and less-than-significant pedestrian impacts, Metro shall prepare a First/Last Mile study that documents preferred pedestrian access to each station, general pedestrian circulation in the immediate vicinity of the station, and potential sites for connections to nearby bus services. The purpose of this study shall include ensuring sufficient circulation, access, and information important to users of the transit system. The results of the study shall be implemented through coordination between Metro and the local jurisdictions of the City of Los Angeles and the City of San Fernando.	Los Angeles County Metropolitan Transportation Authority	Final Design, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check during final design as necessary to confirm a First/Last Mile study has been prepared in accordance with requirements as specified. 2. Check as needed during final design to confirm recommended improvements have been included in project plans. 3. Periodically check construction/project site, as necessary, to confirm that the requirements specified as part of the First/Last Mile study are implemented.	City of Los Angeles and City of San Fernando
MM-TRA-7: To reduce the potential impacts due to removal of the existing bike lanes extending approximately 2 miles north on Van Nuys Boulevard from Parthenia Street to Beachy Avenue and from Laurel Canyon	Los Angeles County Metropolitan Transportation Authority	Final Design	Los Angeles County Metropolitan Transportation Authority	1. Check during final design as necessary to confirm coordination with LADOT regarding replacement locations for Class II bike lanes that meet the goals	City of Los Angeles Department of Transportation

Mitigation Measures	Party Responsible for Implementation	Phase	Party Responsible for Monitoring	Monitoring Activity/Period/Frequency	Outside Agency/ Organization Coordination
Boulevard to San Fernando Road, two parallel corridors have been identified for consideration and approval by the Los Angeles Department of Transportation (LADOT) as bike friendly corridors. These include Filmore Street to the west and Pierce Street to the east, which can be developed as Class III Bike Friendly streets by striping sharrows and providing signage. Metro shall also continue to work with LADOT to identify, to the extent feasible, replacement locations for Class II bike lanes that meet the goals and policies in the City of Los Angeles Bicycle Plan.				and policies of the City of Los Angeles Bicycle Plan has occurred.	
Communities and Neighborhoods					
MM-CN-1: A formal educational and public outreach campaign shall be implemented to discuss potential community and neighborhood concerns, including relocations, visual/aesthetics changes, and fare policies, and to communicate information about the project with property owners and community members.	Los Angeles County Metropolitan Transportation Authority	Pre-Construction, Construction, and Post Construction	Los Angeles County Metropolitan Transportation Authority	Check as necessary during project phases to ensure outreach efforts are conducted in accordance with mitigation measure.	Members of public, and public organizations and agencies
Visual Quality & Aesthetics					
MM-VIS-1: Construction staging shall be located away from residential and recreational areas and shall be screened to minimize visual intrusion into the surrounding landscape. The screening shall be a height and type of material that is appropriate for the context of the surrounding land uses. There shall be Metro-branded community-relevant messaging on the perimeter of the construction staging walls. Lighting within construction areas shall face downward and shall be designed to minimize spillover lighting into adjacent properties.	Los Angeles County Metropolitan Transportation Authority, Contractor	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check to ensure construction bid documents include language detailing requirements as stated in MM-VIS-1. 2. Verify staging areas are screened. 3. Periodically inspect construction sites to confirm compliance with MM-VIS-1	None

Mitigation Measures	Party Responsible for Implementation	Phase	Party Responsible for Monitoring	Monitoring Activity/Period/Frequency	Outside Agency/ Organization Coordination
MM-VIS-2: Vegetation removal shall be minimized and shall be replaced following construction either in-kind or following the landscaping design palette for the project, which would be prepared in consultation with the Cities of Los Angeles and San Fernando, including the City Tree Removal Policy and replacement ratio.	Los Angeles County Metropolitan Transportation Authority, Contractor	Final Design, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check to confirm that a landscaping design palette is developed in coordination with the City of Los Angeles and the City of San Fernando and is included in project plans. 2. Check construction sites as necessary to ensure compliance with plans and MM-VIS-2.	Cities of Los Angeles and San Fernando
MM-VIS-3: Scenic resources, including landscape elements such as rows of palm trees (along Van Nuys Boulevard) or mature trees (along San Fernando Road) and uniform lighting, shall be preserved, where feasible.	Los Angeles County Metropolitan Transportation Authority, Contractor	Final Design, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check plans to ensure scenic resources such as trees are protected where feasible. 2. Periodically inspect construction sites, for compliance with plans.	None
MM-VIS-4: Lighting associated with the project shall be designed to face downward and minimize spillover lighting into adjacent properties, in particular residential and recreational properties.	Los Angeles County Metropolitan Transportation Authority, Contractor	Final Design, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check project plans to ensure compliance with MM-VIS-4 lighting design requirements. 2. Periodically inspect construction sites to confirm compliance with lighting plans.	None
MM-VIS-5: Infrastructure elements shall be designed with materials that minimize glare.	Los Angeles County Metropolitan Transportation Authority, Contractor	Final Design, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check project plans to ensure compliance with material design measures in MM-VIS-5. 2. Periodically inspect construction sites to confirm compliance with plans.	None
Air Quality					
MM-AQ-1: Construction vehicle and equipment trips and use shall be minimized to the extent feasible and unnecessary idling of heavy equipment shall be avoided.	Los Angeles County Metropolitan Transportation Authority, Contractor	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check construction specifications during preparing of construction bid packages to ensure the requirements, as specified in this mitigation measure are included. 2. Periodically check, as necessary, construction sites to confirm compliance with construction specifications as described in this mitigation measure.	None
MM-AQ-2: Solar powered, instead of diesel powered, changeable message signs shall be used.	Los Angeles County Metropolitan Transportation Authority, Contractor	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check construction specifications during preparation of construction bid packages to ensure use/inclusion of solar powered changeable message signs.	None

Mitigation Measures	Party Responsible for Implementation	Phase	Party Responsible for Monitoring	Monitoring Activity/Period/Frequency	Outside Agency/ Organization Coordination
				2. Periodically check, as necessary, construction/project site to ensure usage of solar powered changeable message signs.	
MM-AQ-3: Electricity from power poles, rather than from generators, shall be used where feasible.	Los Angeles County Metropolitan Transportation Authority, Contractor	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check construction specifications during preparation of construction bid packages to ensure use/inclusion of electricity from power poles. 2. Periodically check, as necessary, construction site for usage of electricity from power poles.	None
MM-AQ-4: Engines shall be maintained and tuned per manufacturer's specifications to perform at EPA certification levels and to perform at verified standards applicable to retrofit technologies. Periodic, unscheduled inspections shall be conducted to limit unnecessary idling and to ensure that construction equipment is properly maintained, tuned, and modified consistent with established specifications.	Los Angeles County Metropolitan Transportation Authority, Contractor	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check construction specifications during preparation of construction bid packages to ensure maintenance/tuning of engines shall be set to perform at EPA certification levels. 2. Periodically conduct unscheduled inspections of the construction site, to ensure that engines are maintained and tuned per the manufacturer's specifications to perform at EPA certification levels and other measures described in this mitigation measure.	None
MM-AQ-5: Any tampering with engines shall be prohibited and continuing adherence to manufacturer's recommendations shall be required.	Los Angeles County Metropolitan Transportation Authority, Contractor	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Periodically conduct unscheduled inspections of the construction site, to ensure that tampering with engines is not permitted and the adherence of the manufacturer's recommendations.	None
MM-AQ-6: New, clean (diesel or retrofitted diesel) equipment meeting the most stringent applicable federal or state standards shall be used and the best available emissions control technology shall be employed. Tier 4 engines shall be used for all construction equipment. If non-road construction equipment that meets Tier 4 engine standards is not available, the	Los Angeles County Metropolitan Transportation Authority, Contractor	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check construction specifications during preparation of construction bid packages to ensure use/inclusion of emissions reducing construction equipment and technology. 2. Periodically inspect construction sites, as necessary, to confirm use of equipment that meets the most stringent applicable federal or state standards and the best	None

Mitigation Measures	Party Responsible for Implementation	Phase	Party Responsible for Monitoring	Monitoring Activity/Period/Frequency	Outside Agency/ Organization Coordination
Construction Contractor shall be required to use the best available emissions control technologies on all equipment.				available emissions control technology, and that Tier 4 engines shall be used for all construction equipment.	
MM-AQ-7: EPA-registered particulate traps and other appropriate controls shall be used where suitable to reduce emissions of diesel particulate matter (PM) and other pollutants at the construction site.	Los Angeles County Metropolitan Transportation Authority, Contractor	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check construction specifications during preparation of construction bid packages to ensure use/inclusion of emissions reducing construction equipment and technology. 2. Periodically inspect construction sites, as necessary, to confirm use of EPA-registered particulate traps and other appropriate controls to reduce emissions of diesel particulate matter (PM) and other pollutants.	None
MM-AQ-8: Consistent with South Coast Air Quality Management District Rule 1113, all architectural coatings for building envelope associated with the project shall use coatings with a Volatile Organic Compound content of 50 grams per liter or less.	Los Angeles Metropolitan Transportation Authority, Contractor	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check construction specifications during preparation of construction bid packages to ensure use of low-VOC coatings are specified. 2. Periodically inspect construction sites, as necessary, to confirm use of low-VOC coatings.	None
MM-AQ-9: The Design-Builder shall implement feasible means and methods that would minimize cumulative air quality impacts during the construction period, including, but not limited to, the following: 1. Timing project-related construction activities associated with the maintenance and storage facility (MSF), stations, and track installation such that overlapping schedules are minimized. 2. Timing project-related construction activities so that overlapping schedules with other projects in the area are avoided. 3. Reducing the number of pieces of diesel-fueled equipment used at a given time when construction activities occur in the vicinity of	Los Angeles County Metropolitan Transportation Authority, Contractor	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check construction specifications during preparation of construction bid packages to ensure use/inclusion of means and methods that would minimize cumulative air quality impacts utilizing methods including but not limited to those described as part of this mitigation measure. 2. Periodically check with construction contractor and inspect construction sites, as necessary to confirm use of means and methods to minimize cumulative air quality impacts.	

Mitigation Measures	Party Responsible for Implementation	Phase	Party Responsible for Monitoring	Monitoring Activity/Period/Frequency	Outside Agency/ Organization Coordination
sensitive receptors, such as residences, schools, parks, hospitals, and nursing homes.					
Noise and Vibration					
MM-NOI-1a: Specific measures to be employed to mitigate construction noise impacts shall be developed by the contractor and presented in the form of a Noise Control Plan. The Noise Control Plan shall be submitted for review and approval before the beginning of construction noise activities.	Los Angeles County Metropolitan Transportation Authority, Contractor	Pre-Construction	Los Angeles County Metropolitan Transportation Authority	1. Check construction specifications during preparation of construction bid packages to ensure the development of a Noise Control Plan is included. 2. Check to confirm a Noise Control Plan is prepared, it's submitted for Metro approval, and Metro approval is obtained. 3. Inspect construction sites for compliance with Noise Control Plan.	None
MM-NOI-1b: The contractor shall adequately notify the public of construction operations and schedules no less than 72 hours in advance of construction through a construction notice with confirmed details and a look-ahead briefing several weeks in advance.	Los Angeles County Metropolitan Transportation Authority, Contractor	Construction	Los Angeles County Metropolitan Transportation Authority	Check periodically as necessary to confirm advance notifications to the public are provided in compliance with MM-NOI-1b.	Members of the public and public agencies and organizations
MM-NOI-1c: If a noise variance from Section 41.40(a) of the Los Angeles Municipal Code is sought for nighttime construction work, a noise limit shall be specified. The contractor shall employ a combination of the noise-reducing approaches listed in MM-NOI-1d to meet the noise limit.	Los Angeles County Metropolitan Transportation Authority, Contractor	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check construction plans and schedules as necessary to confirm whether nighttime construction work and noise variance will be required. 2. Check to confirm noise variance is obtained, if required, and a noise limit is specified per MN-NOI-1c.	City of Los Angeles
MM-NOI-1d: Where feasible, the contractor shall use the following noise-reducing approaches: • The contractor shall use specialty equipment with enclosed engines and/or high-performance mufflers. • The contractor shall locate equipment and staging areas as far from noise-sensitive receivers as possible.	Los Angeles County Metropolitan Transportation Authority, Contractor	Pre-Construction, Construction.	Los Angeles County Metropolitan Transportation Authority	1. Check construction specifications during preparation of construction bid packages to ensure all measures listed as part of MM-NOI-1d have been specified. 2. Periodically inspect construction sites to confirm implementation of noise reduction measures.	None

Mitigation Measures	Party Responsible for Implementation	Phase	Party Responsible for Monitoring	Monitoring Activity/Period/Frequency	Outside Agency/ Organization Coordination
• The contractor shall limit unnecessary idling of equipment. • The contractor shall install temporary noise barriers to enclose stationary noise sources, such as compressors, generators, laydown and staging areas, and other noisy equipment. • The contractor shall reroute construction-related truck traffic away from residential buildings to the extent practicable. • The contractor shall sequence the use of equipment so that simultaneous use of the loudest pieces of equipment is avoided as much as practicable. • The contractor shall avoid the use of impact equipment and, where practicable, use non-impact equipment. Non-impact equipment could include electric or hydraulic-powered equipment rather than diesel and gasoline-powered equipment where feasible. • The contractor shall use portable noise control enclosures for welding in the construction staging area. • The contractor shall use lined or covered storage bins, conveyors, and chutes with noise-deadening material for truck loading and operations. • The contractor shall use strobe lights or other OSHA-accepted methods rather than back-up alarms during nighttime construction.					
MM-NOI-1e: If the proposed mitigation measures identified in this section do not reduce the identified significant noise	Los Angeles County Metropolitan	Pre-Construction, Construction	Los Angeles County Metropolitan	Check, as necessary, to determine whether construction noise mitigation measures reduce construction noise impacts on local	LAUSD and other local schools

Mitigation Measures	Party Responsible for Implementation	Phase	Party Responsible for Monitoring	Monitoring Activity/Period/Frequency	Outside Agency/ Organization Coordination
impacts on Los Angeles Unified School District and other affected local schools to a less-than-significant level, Metro shall develop new and appropriate measures, to the extent feasible, to effectively reduce construction-related or operational noise. Provisions shall be made to allow the affected school or designated representative(s) to notify Metro when such measures are warranted.	Transportation Authority, Contractor		Transportation Authority	schools to less-than-significant levels. If not, check to confirm new and appropriate feasible measures are developed and implemented.	
MM-VIB-1: Where equipment, such as a vibratory roller, that produces high levels of vibration is used near buildings, the Construction Vibration Control Plan shall also include mitigation measures to minimize vibration impact during construction. Recommended construction vibration mitigation measures that shall be considered and implemented where feasible include: • The contractor shall minimize the use of tracked vehicles. • The contractor shall avoid vibratory compaction. • The contractor shall monitor vibration levels near sensitive receivers during activities that generate high vibration levels to ensure thresholds are not exceeded.	Los Angeles County Metropolitan Transportation Authority, Contractor	Pre-Construction, Construction.	Los Angeles County Metropolitan Transportation Authority	1. Check construction specifications during preparation of construction bid packages to ensure that development of a Construction Vibration Control Plan is included. 2. Check to confirm Construction Vibration Control Plan is completed, is submitted for Metro approval, and approval is obtained. 3. Inspect construction sites to ensure compliance with measures with Construction Vibration Control Plan	None
MM-NOI-2a: A sound wall shall be constructed at the northern edge of the alignment where the LRT curves to transition between Van Nuys Boulevard and San Fernando Road, in the area bounded by Pinney Street, El Dorado Avenue, Van Nuys Boulevard, and San Fernando Road. The sound wall shall be constructed to mitigate the increase in traffic noise levels that would result from removing the row of buildings in	Los Angeles County Metropolitan Transportation Authority, Contractor	Final Design, Construction.	Los Angeles County Metropolitan Transportation Authority	1. Check project plans to confirm inclusion of sound wall described in MM-NOI-2a. 2. Check construction to confirm construction of sound wall in compliance with plans.	None

Mitigation Measures	Party Responsible for Implementation	Phase	Party Responsible for Monitoring	Monitoring Activity/Period/Frequency	Outside Agency/ Organization Coordination
this area. Sound walls shall be constructed in such a fashion as to not impair the Train Operator vision triangle sightlines.					
MM-NOI-2b: Friction control shall be incorporated into the design for the curves at Van Nuys Boulevard/San Fernando Road, Van Nuys Boulevard/El Dorado Boulevard, and Van Nuys Boulevard/Vesper Avenue. Friction control may consist of installing lubricators on the rail or using an onboard lubrication system that applies lubrication directly to the wheel.	Los Angeles County Metropolitan Transportation Authority, Contractor	Final Design, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check final design plans to confirm inclusion of friction control requirements as stated in MM-NOI-2b. 2. Inspect construction to confirm installation of friction controls.	None
MM-NOI-3a: The following noise limit shall be included in the purchase specifications for the traction power substation (TPSS) units: TPSS noise shall not exceed 50 dBA at a distance of 50 feet from any part of a TPSS unit.	Los Angeles County Metropolitan Transportation Authority, Contractor	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Review construction bid package and specifications to confirm inclusion of TPSS noise specifications identified in MM-NOI-3a. 2. Check noise levels from TPSS to confirm compliance with noise specifications.	None
MM-NOI-3b: The TPSS units shall be located within the parcel as far from sensitive receivers as feasible. If possible, the cooling fans shall be oriented away from sensitive receivers.	Los Angeles County Metropolitan Transportation Authority, Contractor	Final Design, Construction	Los Angeles County Metropolitan Transportation Authority	1. Review and verify final design plans to confirm TPSS locations comply with MM-NOI-3b. 2. Check construction sites to confirm compliance with plans.	None
MM-NOI-3c: If necessary, a sound enclosure shall be built around the TPSS unit to further reduce noise levels at sensitive receivers to below the applicable impact threshold.	Los Angeles County Metropolitan Transportation Authority, Contractor	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check noise levels as necessary to confirm whether noise levels at sensitive receptors are below the applicable threshold. 2. Check to confirm a sound enclosure is constructed if levels exceed applicable thresholds.	None
MM-VIB-2a: Metro shall complete additional vibration analysis to confirm the locations where vibration levels would exceed NEPA significance thresholds, as defined in the FTA (2018) *Transit Noise and Vibration Impact Assessment* guidance manual. Where exceedances would occur, the contractor	Los Angeles County Metropolitan Transportation Authority, Contractor	Final Design, Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Confirm that additional vibration analyses are conducted during final design and that design measures are proposed to ensure applicable thresholds are not exceeded. 2. Check plans to confirm vibration control design measures are included.	None

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shall employ methods to reduce vibration to levels below applicable thresholds. A floating-slab track, a continuous-mat floating slab, or a vibration-isolated embedded track system, such as QTrack, could be considered.				3. Inspect construction sites as necessary to confirm compliance with plans.	
MM-VIB-2b: The contractor shall install moveable point frogs at the crossovers on Van Nuys Boulevard/Osborne Street and at Van Nuys Boulevard/Canterbury Avenue. If further investigation confirms that an alternative low-impact frog would reduce vibration levels below the applicable thresholds, the alternative may be installed.	Los Angeles County Metropolitan Transportation Authority, Contractor	Final Design, Construction	Los Angeles County Metropolitan Transportation Authority	1. Review and verify final design plans for inclusion of vibration control design measures as specified in MM-VIB-2a. 2. Inspect construction sites to confirm compliance with plans.	None
MM-VIB-2c: Low-impact frogs such as conformal frogs or spring frogs shall be used at all crossovers and turnouts not covered under MM-VIB-2b. Traditional crossovers may be used in locations where analysis shows vibration levels will not exceed the applicable thresholds at nearby sensitive receivers.	Los Angeles County Metropolitan Transportation Authority, Contractor	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Review and verify final design plans for inclusion of vibration control design measures as specified in MM-VIB-2a. 2. Inspect construction sites to confirm compliance with plans.	None
Geology, Soils, and Seismicity					
MM-GEO-1: Metro design criteria require probabilistic seismic hazard analyses (PSHA) to estimate earthquake loads on structures. These analyses consider the combined effects of all nearby faults to estimate ground shaking. During Final Design, site-specific PSHAs shall be used as the basis for evaluating the ground motion levels along the project corridor. The structural elements of the proposed project shall be designed and constructed to resist or accommodate appropriate site-specific estimates of ground loads and distortions imposed by the design earthquakes and conform to Metro's Design Standards for the Operating and Maximum Design Earthquakes. The concrete structures will be designed according to the Building	Los Angeles County Metropolitan Transportation Authority	Final Design	Los Angeles County Metropolitan Transportation Authority	1. Verify the completion of PSHA. 2. Check project plans as needed to confirm structural elements are designed in accordance with design standards and code requirements.	None

Mitigation Measures	Party Responsible for Implementation	Phase	Party Responsible for Monitoring	Monitoring Activity/Period/Frequency	Outside Agency/ Organization Coordination
Code Requirements for Structural Concrete (ACI 318) by the American Concrete Institute.					
MM-GEO-2: At liquefaction or seismic settlement prone areas, evaluations by geotechnical engineers shall be performed during Final Design to provide estimates of the magnitude of the anticipated liquefaction or settlement. Based on the magnitude of evaluated liquefaction, either structural design, or ground improvement (such as deep soil mixing) or deep foundations to non-liquefiable soil (such as drilled piles) measures shall be selected. Site-specific design shall be selected based on State of California guidelines and design criteria set forth in the Metro Seismic Design Criteria.	Los Angeles County Metropolitan Transportation Authority,	Final Design	Los Angeles County Metropolitan Transportation Authority	1. Verify that geotechnical engineers conduct evaluations at liquefaction and seismic settlement prone areas. 2. Review and verify plans to ensure that proposed improvements are designed in compliance with seismic guidelines and criteria as specified in MM-GEO-2.	None
Hazardous Waste and Materials					
MM-HAZ-1: An environmental investigation shall be performed during design for transit structures, TPSS locations, stations, and the maintenance and storage facility (MSF). The environmental investigation shall collect soil, groundwater, and/or soil gas samples to delineate potential areas of contamination that may be encountered during construction or operations. The environmental investigation shall include the following: • Properties potentially to be acquired are listed on multiple databases and shall be evaluated further for contaminants that were manufactured, stored, or released from the facility. If contaminated soil (e.g., soil contaminated from organic wastes, sediments, minerals, nutrients, thermal pollutants, toxic chemicals, and/or other hazardous substances) is found, it shall be removed, transported	Los Angeles County Metropolitan Transportation Authority	Final Design, Pre-Construction	Los Angeles County Metropolitan Transportation Authority	1. Verify that environmental investigations to delineate potential areas of contamination are performed for transit structures, TPSS locations, stations and the MSF as described in MM-HAZ-1. 2. Check to confirm hazardous materials are removed, transported, and disposed of or remediated in accordance with applicable regulations.	Local hazardous materials regulatory agencies; CalGEM

to an approved disposal location, and remediated according to state law. • Phase II subsurface investigations for potential impacts from adjoining current or former underground storage tanks (UST) sites and nearby leaking underground storage tank (LUST) sites. • A Phase II subsurface investigation to evaluate potential presence of perchloroethene (PCE) shall be performed along the portions of the project alignment that are adjacent to former and current dry cleaners. If contaminated soil is found, it shall be removed, transported to an approved disposal location, and remediated according to state law. • If construction encroaches into the two former plugged and abandoned dry-hole oil exploration wells mapped adjacent to the proposed project right-of-way, the project team shall consult with the Division of Oil Gas and Geothermal Resources (DOGGR), which is now the California Geologic Energy Management Division (CalGEM), regarding the exact locations of the abandoned holes and the potential impact of the wells on proposed construction. • The locations of proposed improvements involving excavations adjacent to (within 50 feet of) the electrical substation shall be screened prior to construction by testing soils within 5 feet of the existing ground surface for polychlorinated biphenyls (PCBs). If contaminated soil is found, it shall be removed, transported to an approved disposal location, and remediated according to state law. • Buildings that will be demolished shall have a comprehensive asbestos					

containing materials (ACM) inspection prior to demolition. In addition, ACM may be present in the existing bridge crossings at the Pacoima Diversion Channels. If improvements associated with the proposed project will disturb the existing bridge crossings, then these structures shall be evaluated for suspect ACM. If ACM is found, it shall be removed, and transported to an approved disposal location according to state law. • Areas where soil may be disturbed during construction shall be tested for aerially deposited lead (ADL) according to Caltrans ADL testing guidelines. If contaminated soil is found, it shall be removed, transported to an approved disposal location, and remediated according to state law. • Lead and other heavy metals, such as chromium, may be present within yellow thermoplastic paint markings on the pavement. These surfacing materials shall be tested for lead based paint (LBP) prior to removal. If contaminated soil is found, it shall be removed, transported to an approved disposal location, and remediated according to state law. • Former railroad rights-of-way that crossed or were adjacent to the project right-of-way may contain hazardous materials from the use of weed control, including herbicides and arsenic, and may also contain Treated Wood Waste (TWW). Soil sampling for potentially hazardous weed control substances shall be conducted for health and safety concerns in the event that construction earthwork involves soil removal from the former railroad rights-of-way. If encountered during construction,					

Mitigation Measures	Party Responsible for Implementation	Phase	Party Responsible for Monitoring	Monitoring Activity/Period/Frequency	Outside Agency/ Organization Coordination
railroad ties designated for reuse or disposal (including previously salvaged railroad ties in the project right-of-way) shall be managed or disposed of as TWW in accordance with Alternative Management Standards provided in CCR Title 22 Section 67386.					
MM-HAZ-2: The contractor shall implement a Worker Health and Safety Plan prior to the start of construction activities. All workers shall be required to review the plan, receive training if necessary, and sign the plan prior to starting work. The plan shall identify properties of concern, the nature and extent of contaminants that could be encountered during excavation activities, appropriate health and environmental protection procedures and equipment, emergency response procedures including the most direct route to a hospital, and contact information for the Site Safety Officer.	Contractor	Pre-Construction	Los Angeles County Metropolitan Transportation Authority	1. Verify that construction bid documents include the development and implementation of a Worker Health and Safety Plan. 2. Check to confirm plan has been completed.	None
MM-HAZ-3: The contractor shall implement a Contaminated Soil/Groundwater Management Plan during construction to establish procedures to follow if contamination is encountered in order to minimize associated risks. The plan shall be prepared during the final design phase of the project, and the construction contractor shall be held to the level of performance specified in the plan. The plan shall include procedures for the implementation of the following measures: • Contacting appropriate regulatory agencies if contaminated soil or groundwater (e.g., groundwater contaminated from organic wastes, sediments, minerals, nutrients, thermal	Contractor	Final Design; Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Verify that construction bid documents include the development of a Contaminated Soil/Groundwater Management Plan. 2. Check to confirm plan has been completed. 3. If contaminated soils are encountered, check, as necessary, to confirm procedures are followed in compliance with plan and that contaminated soils are handled, transported, and treated in accordance with regulatory agencies and Section 4.10.1.1 of the EIR.	None

Mitigation Measures	Party Responsible for Implementation	Phase	Party Responsible for Monitoring	Monitoring Activity/Period/Frequency	Outside Agency/ Organization Coordination
pollutants, toxic chemicals, and/or other hazardous substances) is encountered • Sampling and analysis of soil and/or groundwater known or suspected to be impacted by hazardous materials • The legal and proper handling, storage, treatment, transport, and disposal of contaminated soil and/or groundwater shall be delineated and conducted in consultation with regulatory agencies and in accordance with established statutory and regulatory requirements in Section 4.10.1.1 of this FEIR • Implementation of dust control measures such as soil wetting, wind screens, etc., for contaminated soil • Groundwater collection, treatment, and discharge shall be performed according to applicable standards and procedures listed in Section 4.10.1.1 of this FEIR					
MM-HAZ-4: The contractor shall properly maintain equipment and properly store and manage related hazardous materials, so as to prevent motor oil, or other potentially hazardous substances used during construction, from spilling onto the soil. If contaminated soil is found, it shall be removed, transported to an approved disposal location, and remediated according to state law.	Los Angeles County Metropolitan Transportation Authority, Contractor	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Verify that construction bid documents include contractor responsibilities. 2. Periodically inspect construction sites and staging areas to confirm proper handling of hazardous substances. 3. If contaminated soils are encountered, check, as necessary, to confirm that contaminated soils are handled, transported, and treated in accordance with regulatory agency requirements and Section 4.10.1.1 of the FEIR.	None
MM-HAZ-5: For reconstruction of the Pacoima Wash bridge that crosses Metro right-of-way, the construction spoils (e.g., excavated soils, cuttings generated during installation of Cast-in-drilled hole (CIDH) piles, including those in contact with the groundwater, shall be contained and tested	Los Angeles County Metropolitan Transportation Authority, Contractor	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check construction specifications during preparation of construction bid packages to confirm all measures listed as part of MM-HAZ-5 have been specified.	None

Mitigation Measures	Party Responsible for Implementation	Phase	Party Responsible for Monitoring	Monitoring Activity/Period/Frequency	Outside Agency/ Organization Coordination
for total chromium, 1,4-dioxane, trichloroethylene (TCE), and perchloroethene (PCE) to determine appropriate disposal.				2. Periodically inspect construction sites, as necessary, to confirm compliance with MM-HAZ-5.	
MM-HAZ-6: A Contaminated Soil/Groundwater Management Plan shall be prepared during final design that describes appropriate methods and measures to manage contamination encountered during construction.	Los Angeles County Metropolitan Transportation Authority, Contractor	Final Design	Los Angeles County Metropolitan Transportation Authority	Check to confirm that a Contaminated Soil/Groundwater Management Plan has been prepared.	None
Ecosystems and Biological Resources					
MM-BIO-1: Avoid and Minimize Project-Related Impacts on Special-Status Bat Species In the maternity season (April 15 through August 31) prior to the commencement of construction activities, a field survey shall be conducted by a qualified biologist to determine the potential presence of colonial bat roosts (including palm trees) on or within 100 feet of the project boundaries. Should a potential roost be identified that will be affected by proposed construction activities, a visual inspection and/or one-night emergence survey shall be used to determine if it is being used as a maternity-roost. To avoid any impacts on roosting bats resulting from construction activities, the following measures shall be implemented: **Bridges and Overpasses** • Should potential bat roosts be identified that will require removal, humane exclusionary devices shall be used. Installation would occur outside of the maternity season and hibernation period (February 16-April 14 and August 16-October 30, or as determined	Qualified bat biologist	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check once prior to construction that a qualified biologist is retained. 2. Periodically check construction plans and schedules to confirm whether vegetation removal will or will not occur during non-breeding season. 3. Confirm as necessary the completion of Special-Status Bat Species surveys by a qualified biologist. 4. Check to confirm as necessary that a bat biologist is monitoring roosting sites and check to confirm the installation and implementation of exclusion devices in the event those devices are needed.	CDFW

Mitigation Measures	Party Responsible for Implementation	Phase	Party Responsible for Monitoring	Monitoring Activity/Period/Frequency	Outside Agency/ Organization Coordination
by a qualified biologist) unless it has been confirmed as absent of bats. If the roost has been determined to have been used by bats, the creation of alternate roost habitat shall be required, with California Department of Fish and Wildlife (CDFW) consultation. The roost shall not be removed until it has been confirmed by a qualified biologist that all bats have been successfully excluded. • Should an active maternity roost be identified, a determination (in consultation with the California Department of Fish and Wildlife or a qualified bat expert) shall be made whether indirect effects of construction-related activities (i.e., noise and vibration) could substantially disturb roosting bats. This determination shall be based on baseline noise/vibrations levels, anticipated noise-levels associated with construction of the proposed project, and the sensitivity to noise-disturbances of the bat species present. If it is determined that noise could result in the temporary abandonment of a day-roost, construction-related activities shall be scheduled to avoid the maternity season (April 15 through August 31), or as determined by the biologist. **Trees** All trees to be removed as part of the project shall be evaluated for their potential to support bat roosts. The following measures would apply to trees to be removed that are determined to provide potential bat roost habitat by a qualified biologist.					

Mitigation Measures	Party Responsible for Implementation	Phase	Party Responsible for Monitoring	Monitoring Activity/Period/Frequency	Outside Agency/ Organization Coordination
• If trees with colonial bat roost potential require removal during the maternity season (April 15 through August 31), a qualified bat biologist shall conduct a one-night emergence survey during acceptable weather conditions (no rain or high winds, night temperatures above 52˚F) or if conditions permit, physically examine the roost for presence or absence of bats (such as with lift equipment) before the start of construction/removal. If the roost is determined to be occupied during this time, the tree shall be avoided until after the maternity season when young are self-sufficiently volant. • If trees with colonial bat roost potential require removal during the winter months when bats are in torpor, a state in which the bats have significantly lowered their physiological state, such as body temperature and metabolic rate, due to lowered food availability. (October 31 through February 15, but is dependent on specific weather conditions), a qualified bat biologist shall physically examine the roost if conditions permit for presence or absence of bats (such as with lift equipment) before the start of construction. If the roost is determined to be occupied during this time, the tree shall be avoided until after the winter season when bats are once again active. • Trees with potential colonial bat habitat can be removed outside of the maternity season and winter season (February 16 through April 14 and August 16 through October 30, or as determined by a qualified biologist) using a two-step tree					

Mitigation Measures	Party Responsible for Implementation	Phase	Party Responsible for Monitoring	Monitoring Activity/Period/Frequency	Outside Agency/ Organization Coordination
trimming process that occurs over 2 consecutive days. On Day 1, under the supervision of a qualified bat biologist, Step 1 shall include branches and limbs with no cavities removed by hand (e.g., using chainsaws). This will create a disturbance (noise and vibration) and physically alter the tree. Bats roosting in the tree will either abandon the roost immediately (rarely) or, after emergence, will avoid returning to the roost. On Day 2, Step 2 of the tree removal may occur, which would be removal of the remainder of the tree. Trees that are only to be trimmed and not removed would be processed in the same manner; if a branch with a potential roost must be removed, all surrounding branches would be trimmed on Day 1 under supervision of a qualified bat biologist and then the limb with the potential roost would be removed on Day 2. • Trees with foliage (and without colonial bat roost potential), such as sycamores, that can support lasiurine bats, shall have the two-step tree trimming process occur over one day under the supervision of a qualified bat biologist. Step 1 would be to remove adjacent, smaller, or non-habitat trees to create noise and vibration disturbance that would cause abandonment. Step 2 would be to remove the remainder of tree on that same day. For palm trees that can support western yellow bat (the only special-status lasiurine species with the potential to occur in the project area), shall use the two-step tree process over two days. Western yellow					

Mitigation Measures	Party Responsible for Implementation	Phase	Party Responsible for Monitoring	Monitoring Activity/Period/Frequency	Outside Agency/ Organization Coordination
bats may move deeper within the dead fronds during disturbance. The two-day process will allow the bats to vacate the tree before removal.					

Mitigation Measures	Party Responsible for Implementation	Phase	Party Responsible for Monitoring	Monitoring Activity/Period/Frequency	Outside Agency/ Organization Coordination
MM BIO-2: Avoid Impacts on Nesting Birds (including raptors) To avoid any impacts on migratory birds, resulting from construction activities that may occur during the nesting season, March 1 through August 31, the following measure shall be implemented: • A qualified biologist shall conduct a preconstruction survey of the proposed construction alignment with a 150-foot buffer for passerines and 500-feet for raptors around the site. This preconstruction survey shall commence no more than 3 days prior to the onset of construction, such as clearing and grubbing and initial ground disturbance. • If a nest is observed, an appropriate buffer shall be established, as determined by a qualified biologist, based on the sensitivity of the species. For nesting raptors, the minimum buffer shall be 150 feet. The contractor shall be notified of active nests and directed to avoid any activities within the buffer zone until the nests are no longer considered to be active by the biologist.	Qualified biologist	Pre-Construction	Los Angeles County Metropolitan Transportation Authority	1. Periodically check construction plans and schedules to confirm whether vegetation removal will occur during non-breeding season. 2. If vegetation removal is scheduled to occur during the breeding season, check to confirm a qualified biologist has been retained and conducts nesting bird surveys. 3. If active nests are detected, check with qualified biologist and inspect construction site to confirm buffer areas are clearly demarcated with stakes and flags.	None

MM BIO-3: Jurisdictional Waters Any work resulting in materials that could be discharged into jurisdictional features shall adhere to strict best management practices (BMPs) to prevent potential pollutants from entering any jurisdictional feature. Applicable BMPs to be applied shall be included in the Stormwater Pollution Prevention Plan and/or Water Quality Management Plan and shall include, but not be limited to, the following BMPs as appropriate: • Containment around the site shall include use of temporary measures such as fiber rolls to surround the construction areas to prevent any spills of slurry discharge or spoils recovered during the separation process; • Downstream drainage inlets shall be temporarily covered to prevent discharge from entering the storm drain system; • Construction entrances/exits shall be properly set up so as to reduce or eliminate the tracking of sediment and debris offsite by including grading to prevent runoff from leaving the site, and establishing "rumble racks" or wheel water points at the exit to remove sediment from construction vehicles; • Onsite rinsing or cleaning of any equipment shall be performed in contained areas and rinse water shall be collected for appropriate disposal; • Use of a tank on work sites to collect the water for periodic offsite disposal; • Soil and other building materials (e.g., gravel) stored onsite shall be contained and covered to prevent contact with stormwater and offsite discharge; and • Water quality of runoff shall be periodically monitored before discharge	Contractor	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Ensure inclusion of the development of a Stormwater Pollution Prevention Plan and Water Quality Management Plan in construction bid documents 2. Verify plans have been completed prior to construction. 3. Periodically check construction sites during construction to ensure compliance with plans.	None

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from the site and into the storm drainage system.					
MM BIO-4: A Project Tree Report Shall Be Approved by the City of Los Angeles and City of San Fernando Prior to construction, the contractor shall review the approved alternative alignment to determine whether any trees protected by the City of Los Angeles Tree Ordinance 177404 and City of San Fernando Comprehensive Tree Management Program Ordinance (Ordinance No. 1539) will be removed or trimmed. A tree report must be prepared, by a qualified arborist, for the project and approved by each city. Trees approved for removal (or replacement) shall be done in accordance to the specifications outlined in the city ordinances.	Contractor, Qualified arborist	Pre-Construction	Los Angeles County Metropolitan Transportation Authority	1. If tree removal is required, check to confirm a qualified arborist has been retained. 2. Check to ensure qualified arborist is monitoring construction site as needed. 3. If tree removal is required, the contractor shall verify that tree removal or replacement is in accordance with City of Los Angeles Tree Ordinance 177404 and City of San Fernando Comprehensive Tree Management Program Ordinance.	City of Los Angeles and City of San Fernando
Safety and Security					
MM-SS-1: Alternate walkways for pedestrians shall be provided around construction staging sites in accordance with ADA requirements.	Los Angeles County Metropolitan Transportation Authority, Contractor	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check to ensure construction bid documents include language detailing requirements as stated in MM-SS-1. 2. Periodically inspect construction sites to confirm compliance ADA requirements.	None
MM-SS-2: Safe and convenient pedestrian routes to local schools shall be maintained during construction.	Los Angeles County Metropolitan Transportation Authority, Contractor	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check to ensure construction bid documents include language detailing requirements as stated in MM-SS-2 2. Periodically inspect construction sites to confirm safe and convenient pedestrian routes to local schools are maintained.	None
MM-SS-3: Ongoing communication with school administrators shall be maintained to ensure sufficient notice of construction activities that could affect pedestrian routes to schools is provided.	Los Angeles County Metropolitan Transportation Authority	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check periodically to confirm sufficient notice of construction activities is provided to school administrators.	Local school administrators

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MM-SS-4: All pedestrian and bicyclist detour locations around staging sites shall be signed and marked in accordance with the Manual on Uniform Traffic Control Devices "work zone" guidance, and other applicable local and state requirements.	Los Angeles County Metropolitan Transportation Authority, Contractor	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check to ensure construction bid documents include language detailing requirements as stated in MM-SS-4 2. Periodically inspect construction sites to confirm all pedestrian and bicyclist detour locations around staging sites are signed and marked in accordance with the Manual on Uniform Traffic Control Devices. 3.	None
MM-SS-5: Appropriate traffic controls (signs and signals) shall be installed and maintained to ensure pedestrian and vehicular safety.	Los Angeles County Metropolitan Transportation Authority, Contractor	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check to ensure construction bid documents include language detailing requirements as stated in MM-SS-5. 2. Periodically inspect construction sites to confirm appropriate traffic controls (signs and signals) are installed and maintained.	None
MM-SS-6: To the extent feasible, construction haul trucks shall not use haul routes that pass any school, except when the school is not in session.	Los Angeles County Metropolitan Transportation Authority, Contractor	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check to ensure construction bid documents include language detailing requirements as stated in MM-SS-6. 2. Periodically confirm haul routes to confirm compliance with MM-SS-6.	None
MM-SS-7: Staging or parking of construction-related vehicles, including worker-transport vehicles, shall not occur on or adjacent to a school property when school is in session.	Los Angeles County Metropolitan Transportation Authority, Contractor	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check to ensure construction bid documents include language detailing requirements as stated in MM-SS-7. 2. Periodically inspect construction sites to confirm compliance with MM-SS-7.	None
MM-SS-8: Crossing guards or flaggers shall be provided at affected school crossings when the safety of children may be compromised by construction-related activities.	Los Angeles County Metropolitan Transportation Authority, Contractor	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check to ensure construction bid documents include language detailing requirements as stated in MM-SS-8. 2. Periodically inspect construction sites to confirm crossing guards or flaggers are provided at affected school crossings.	Affected schools
MM-SS-9: Barriers or fencing shall be installed to secure construction equipment and to minimize trespassing, vandalism,	Los Angeles County Metropolitan	Pre-Construction, Construction	Los Angeles County Metropolitan	1. Check to ensure construction bid documents include language detailing requirements as stated in MM-SS-9.	None

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short-cut attractions, and attractive nuisances.	Transportation Authority, Contractor		Transportation Authority	2. Periodically inspect construction sites to confirm barriers or fencing is installed when appropriate.	
MM-SS-10: Security patrols shall be provided to minimize trespassing, vandalism, and short-cut attractions where construction activities occur in the vicinity of local schools.	Los Angeles County Metropolitan Transportation Authority, Contractor	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check to ensure construction bid documents include language detailing requirements as stated in MM-SS-10. 2. Periodically inspect construction sites to confirm security patrols are provided when deemed necessary. 3.	None
MM-SS-11: Project plans, work plans, and traffic control measures shall be coordinated with emergency responders during preliminary engineering, final design, and construction to limit effects on emergency response times.	Los Angeles County Metropolitan Transportation Authority, Contractor	Final Design, Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check to confirm that coordination with emergency responders occurs as identified in MM-SS-11. 2. Review and verify final design plans for inclusion of requirements as stated in MM-SS-11. 3. Periodically inspect construction sites to confirm compliance with plans.	Local emergency responders
MM-SS-12: All stations shall be illuminated to avoid shadows and all pedestrian pathways leading to/from sidewalks and parking facilities shall be well illuminated. In addition, lighting would provide excellent visibility for train operators to be able to react to possible conflicts, especially to pedestrians crossing the track.	Los Angeles County Metropolitan Transportation Authority, Contractor	Final Design	Los Angeles County Metropolitan Transportation Authority	1. Check project plans and drawings to confirm inclusion of lighting design measures. 2. Inspect construction sites to confirm compliance with plans.	None
MM-SS-13: Proposed station designs shall not include design elements that obstruct visibility or observation nor provide discrete locations favorable to crime; pedestrian access to at-grade stations shall be at ground-level with clear sight lines.	Los Angeles County Metropolitan Transportation Authority	Final Design	Los Angeles County Metropolitan Transportation Authority	1. Check project plans and drawings to confirm inclusion of design elements as stated in MM-SS-13. 2. Periodically inspect construction sites to confirm compliance with plans.	None
MM-SS-14: The following measures shall be implemented to reduce pedestrian circulation impacts and hazards: • Sidewalk widths shall be designed with the widest dimensions feasible in conformance with the Los	Los Angeles County Metropolitan Transportation Authority	Final Design	Los Angeles County Metropolitan Transportation Authority	1. Check to ensure project plans and drawings comply with design requirements stated in MM-SS-14. 2. Inspect construction sites as needed to confirm compliance with plans.	None

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Angeles/Metro's adopted "Land Use/Transportation Policy." • Minimum widths shall not be less than those allowed by the State of California Title 24 access requirements, or the ADA design recommendations. Section 1113A of Title 24 states that walks and sidewalks shall be a minimum of 48 inches (1,219 mm) in width, except that walks serving dwelling units in covered multi-family dwelling buildings may be reduced to 36 inches (914 mm) in clear width except at doors. • Accommodating pedestrian movements and flows shall take priority over other transportation improvements, including automobile access. • Physical improvements shall ensure that all stations are fully accessible as defined in the ADA.					
MM-SS-15: Wide crosswalks shall be provided in areas immediately around proposed stations to facilitate pedestrian mobility.	Los Angeles County Metropolitan Transportation Authority	Final Design, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check project plans and drawings to ensure compliance, with requirements stated in MM-SS-15. 2. Periodically inspect construction sites to confirm compliance with plans.	None
MM-SS-16: Metro shall coordinate and consult with the LAFD, LAPD, LASD, and the City of San Fernando Police Department to develop safety and security plans for the proposed alignment, parking facilities, and station areas.	Los Angeles County Metropolitan Transportation Authority	Final Design, Operation	Los Angeles County Metropolitan Transportation Authority	1. Check to confirm development of safety plans in coordination with the LAFD, LAPD, and LASD as stated in MM-SS-16. 2. Check as necessary during operation to confirm implementation of plans.	LAFD, LAPD, and LASD
MM-SS-17: Fire separations shall be provided and maintained in public occupancy areas. Station public occupancy shall be separated from station ancillary occupancy by a minimum 2-hour fire-rated wall. The only exception is that a maximum of two station agents, supervisors, or	Los Angeles County Metropolitan Transportation Authority	Final Design, Construction,	Los Angeles County Metropolitan Transportation Authority	1. Check to ensure project plans and drawings include requirements stated in MM-SS-17. 2. Inspect construction sites as necessary to confirm compliance with plans.	None

Mitigation Measures	Party Responsible for Implementation	Phase	Party Responsible for Monitoring	Monitoring Activity/Period/Frequency	Outside Agency/ Organization Coordination
information booths may be located within station public occupancy areas.					
MM-SS-18: For portions of the alignment where pedestrians and/or motor vehicles must cross the tracks, Metro shall prepare grade crossing applications in coordination with the CPUC and local public agencies, such as LADOT, City of Los Angeles Bureau of Engineering, and the City and County of Los Angeles Fire Departments. Crossings shall require approval from the CPUC and shall meet applicable CPUC standards for grade crossings.	Los Angeles County Metropolitan Transportation Authority	Final Design	Los Angeles County Metropolitan Transportation Authority	1. Check to confirm grade crossing applications are prepared in coordination with specified agencies and that they meet CPUC standards. 2. Check to confirm applications are approved by CPUC.	CPUC, LADOT, City of Los Angeles Bureau of Engineering, and the City and County of Los Angeles Fire Departments
MM-SS-19: All proposed LRT stations and related parking facilities shall be equipped with monitoring equipment, which would primarily consist of video surveillance equipment to monitor strategic areas of the LRT stations and walkways, and/or be monitored by Metro security personnel on a regular basis.	Los Angeles County Metropolitan Transportation Authority, Contractor	Final Design, Operation	Los Angeles County Metropolitan Transportation Authority	1. Check to ensure project plans and drawings include monitoring equipment. 2. Inspect construction sites as necessary to confirm compliance with plans. 3. Check during operation to confirm monitoring by security personnel is occurring on a regular basis.	None
MM-SS-20: Metro shall implement a security plan for LRT operations. The plan shall include both in-car and station surveillance by Metro security or other local jurisdiction security personnel.	Los Angeles County Metropolitan Transportation Authority, Contractor	Final Design, Pre-Construction, Operation	Los Angeles County Metropolitan Transportation Authority	1. Verify preparation of a security plan for LRT operations. 2. Check during operation as necessary that the security plan is implemented	Local jurisdiction security personnel
MM-SS-21: Metro is continuing to investigate light rail vehicle modifications to increase light rail vehicle safety and minimize or prevent train and pedestrian conflicts. Metro's design criteria also identifies multiple efforts to increase light rail vehicle safety and minimize or prevent the potential for pedestrians and vehicle conflicts. Measures identified shall be included during the final design of the LPA.	Los Angeles County Metropolitan Transportation Authority, Contractor	Final Design, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check as necessary vehicle safety specifications in vehicle procurement documents and project plans for compliance with safety specifications in Metro's design criteria. 2. Check construction sites for compliance with plans.	None
MM-SS-22: To reduce potential risk of collisions between LRTs and automobiles on	Los Angeles County Metropolitan	Final Design, Construction	Los Angeles County Metropolitan	1. Check to confirm coordination occurs with the CPUC, City and County of Los	CPUC, City and County of Los

Mitigation Measures	Party Responsible for Implementation	Phase	Party Responsible for Monitoring	Monitoring Activity/Period/Frequency	Outside Agency/ Organization Coordination
the street portion of the LPA, Metro shall coordinate with the CPUC, City and County of Los Angeles traffic control departments, City of Los Angeles Bureau of Engineering, and the City and County of Los Angeles Fire Departments, and also comply with the Federal Highway Administration's Manual on Uniform Traffic Control Devices for signing and pavement marking treatments.	Transportation Authority		Transportation Authority	Angeles traffic control departments, City of Los Angeles Bureau of Engineering, City and County of Los Angeles Fire Departments and project plans comply with Federal Highway Administration's Manual on Uniform Traffic Control Devices. 2. Inspect construction sites to confirm compliance with plans.	Angeles traffic control departments, City of Los Angeles Bureau of Engineering, and the City and County of Los Angeles Fire Departments
MM-SS-23: The diverse needs of different types of traveling public including senior citizens, disabled citizens, low-income citizens, shall be addressed through a formal educational and outreach campaign. The campaign shall target these diverse community members to educate them on proper system use and benefits of LRT ridership.	Los Angeles County Metropolitan Transportation Authority	Final Design, Construction, Operation	Los Angeles County Metropolitan Transportation Authority	1. Confirm that a formal educational and outreach campaign is implemented.	None
Historic, Archaeological, and Paleontological Resources					
MM-AR-1: Ground disturbing activities within site areas 19-001124 and 19-002681 and within a 50-foot buffer area around the sites shall be monitored by an Archaeological and Native American monitor. Construction related ground disturbance includes grading, excavation, trenching, and drilling. An Archaeological monitor and a Native American monitor shall examine all sediments disturbed during earth moving activities, including geotechnical drilling and environmental borings, if being conducted, prior to construction. Archaeological monitoring for site CA-LAN-2681 shall be conducted as discussed in the project's Cultural Resources Monitoring Plan (CRMP). All archeological monitoring and any necessary identification, testing, and evaluation of resources identified during	Los Angeles County Metropolitan Transportation Authority	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority /Archaeological and Native American monitor	1. Check once prior to construction that a qualified archaeologist/Native American Monitor has been retained to conduct cultural resources monitoring. 2. Check periodically, as necessary, that a qualified archaeologist is monitoring the site during ground disturbance activities pursuant to the mitigation measure requirements.	Native American Tribe

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monitoring shall be conducted per the methods and procedures described in the CRMP for the project. Standard methods of excavation such as grading and trenching shall be monitored by observation of the excavations as they occur. Drilling of project features such as the overhead contact system (OCS) result in earthen materials being delivered to the ground surface as loosened spoils. Materials to be examined by the Archaeological and Native American monitors are spoils removed from the drill holes while the drilling occurs. The monitors must be provided a safe location and opportunity to view spoils as they are being stored prior to being hauled away from the work area. Access of the monitors to the spoils material may be limited by safety concerns or by hazardous materials contamination. If requested by an Archaeological or Native American monitor, opportunities shall be provided for the monitor, as part of their daily shift activities, to screen or rake spoils to determine if the spoils contain cultural materials. Archaeological monitors are empowered to briefly halt construction if a discovery is made during standard excavation, such as grading and trenching, in the area of that discovery and a 50-foot buffer zone. If a Native American monitor wishes to halt construction, the monitor shall consult with the Archaeological monitor, who may then briefly halt construction. A request to halt activities by the Archaeological monitor should have no effect on ground disturbing activities outside the 50-foot buffer zone;					

Mitigation Measures	Party Responsible for Implementation	Phase	Party Responsible for Monitoring	Monitoring Activity/Period/Frequency	Outside Agency/ Organization Coordination
however, spoil piles may not be removed until the monitor can examine them. If an Archaeological or Native American monitor observes an isolated find, the Archaeological monitor shall temporarily halt construction in order to document the find. Documentation shall be completed by collecting a GPS point, photography, and recording information onto the daily monitoring log. All isolated prehistoric artifacts shall be collected. Diagnostic historic-era items shall be collected. Once an isolated item is documented, construction may resume.					
MM-AR-2: If buried cultural materials are encountered in areas not actively being monitored during construction, the Contractor Project Foreman shall halt construction in a 50-foot radius around the discovery and shall immediately contact the Metro Project Manager, Metro Environmental Specialist, and Project Archaeologist. Per the CRMP prepared for the proposed project, for any discovery of an archaeological feature, regardless of eligibility, the Metro Environmental Specialist shall notify all Consulting Parties within 48 hours of the discovery. Notifications shall not be made for ubiquitous infrastructure elements such as modern utilities (cistern, electric, gas, sewer, and water supply lines), transportation infrastructure	Los Angeles County Metropolitan Transportation Authority, Contractor Project Foreman	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority Project Manager, Los Angeles County Metropolitan Transportation Authority Environmental Specialist, and Project Archaeologist	1. Check construction specifications during preparation of construction bid packages to ensure that specifications as described in this mitigation for handling of buried cultural material that may be encountered in areas that are not actively being monitored during construction. 2. Check, as necessary, to confirm that construction activities are diverted pursuant to the mitigation measure and that the Metro Project Manager, Metro Environmental Specialist, and Project Archaeologist have been contacted, and Consulting Parties are notified as described in the mitigation measure.	FTA, SHPO, other consulting parties
MM-AR-3: In the event that human remains are encountered during construction, potentially destructive activities in the vicinity of the discovery shall be stopped and the provisions of California PRC § 5097.98	Archaeological Monitor	Pre-Construction, Construction	Metro Project Manager, Metro Environmental Specialist, and	1. Check construction specifications during preparation of construction bid packages to ensure all measures listed as part of MM-AR-3 have been included.	LA County Coroner and FTA

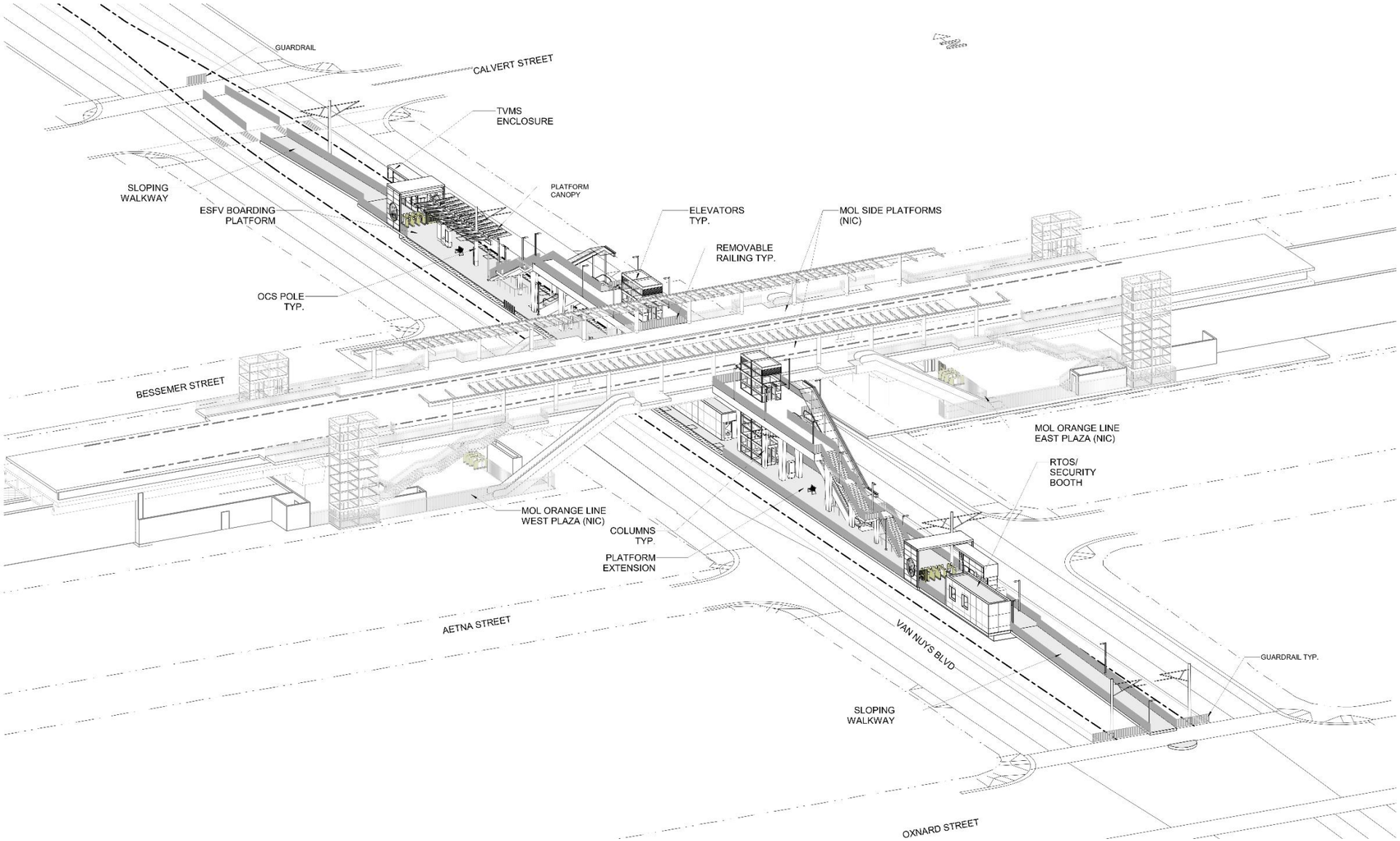
Mitigation Measures	Party Responsible for Implementation	Phase	Party Responsible for Monitoring	Monitoring Activity/Period/Frequency	Outside Agency/ Organization Coordination
and HSC § 7050.5 shall be followed. The Archaeological monitor shall halt construction, establish a 50-foot buffer around the discovery, and shall contact the Metro Project Manager, Metro Environmental Specialist, and Project Archaeologist. The Metro Environmental Specialist shall notify the County Coroner on the same day as the discovery and other Consulting Parties within 48 hours of discovery. Treatment of the remains and all subsequent actions shall be completed per the CRMP.			Project Archaeologist	2. Check periodically, as necessary during construction, to confirm that in the event that human remains are uncovered, construction has been halted at least 50 feet from the discovery and the area protected per State Health and Safety Code Section 7050.5. Confirm that the County coroner has been notified to determine the origin and disposition of the human remains pursuant to PRC Section 5097.98. 3. Check periodically, during construction, as necessary, to confirm the NAHC has been notified within 48 hours and all coordination protocols listed under this mitigation measure have been followed, in the event that the coroner determined the remains to be Native American.	
Although no impacts to paleontological resources are anticipated as a result of the LPA due to the anticipated shallow depth of excavation, the following construction mitigation measure is proposed should excavation depths be greater than anticipated and construction impacts to paleontological resources occur. **MM-PR-1:** Metro shall retain the services of a qualified paleontologist (minimum of graduate degree, 10 years of experience as a principal investigator, and specialty in vertebrate paleontology) to oversee execution of this mitigation measure. Metro's qualified principal paleontologist shall then develop a Paleontological Resources Monitoring and Mitigation Plan (PRMMP) acceptable to the collections manager of the Vertebrate Paleontology Section of the	Los Angeles County Metropolitan Transportation Authority, Qualified Paleontologist	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority	1. Check once prior to construction that a qualified paleontologist has been retained to prepare the PRMMP, if determined necessary based on anticipated depth of construction activities. 2. Check to confirm that the PRMMP, if one is required, has been prepared. 3. Periodically, as necessary, check that a qualified Paleontological Monitor is monitoring sites in accordance with the PRMMP.	Natural History Museum of Los Angeles County

Mitigation Measures	Party Responsible for Implementation	Phase	Party Responsible for Monitoring	Monitoring Activity/Period/Frequency	Outside Agency/ Organization Coordination
Natural History Museum of Los Angeles County. Metro will implement the PRMMP during construction. The PRMMP will clearly demarcate the areas to be monitored and specify criteria. At the completion of paleontological monitoring for the proposed project, a paleontological resources monitoring report will be prepared and submitted to the Natural History Museum of Los Angeles County to document the results of the monitoring activities and summarize the results of any paleontological resources encountered. The PRMMP shall include specifications for processing, stabilizing, identifying, and cataloging any fossils recovered as part of the proposed project. Metro's qualified principal paleontologist shall prepare a report detailing the paleontological resources recovered, their significance, and arrangements made for their curation at the conclusion of the monitoring effort.					
The following construction mitigation measure is proposed to mitigate potentially significant impacts to paleontological resources that could occur during construction. **MM-PR-2:** Prior to the start of construction a qualified Principal Paleontologist shall prepare a Paleontological Mitigation Plan (PMP) that includes the following requirements: • All project personnel involved in ground-disturbing activities shall receive paleontological resources awareness training before beginning work. • Excavations, excluding drilling, deeper than 8 feet below the current surface in	Los Angeles County Metropolitan Transportation Authority, Qualified Principal Paleontologist	Pre-Construction, Construction	Los Angeles County Metropolitan Transportation Authority /Qualified Paleontologist	1. Check once prior to construction that a qualified Principal Paleontologist has been retained to prepare the PMP. 2. Check to confirm that the PMP has been prepared and it includes the requirements identified in MM-PR-2. 3. Check as necessary to confirm that personnel involved in ground-disturbing activities have received awareness training. 4. Periodically check, as necessary, that spot checking of excavations deeper than 8 feet is occurring and that a full-time monitor is on site when paleontologically sensitive older alluvium is reached.	None

Mitigation Measures	Party Responsible for Implementation	Phase	Party Responsible for Monitoring	Monitoring Activity/Period/Frequency	Outside Agency/ Organization Coordination
the Quaternary alluvium shall be periodically spot checked to determine when older sediments conducive to fossil preservation are encountered. Once the paleontologically sensitive older alluvium is reached, a qualified paleontologist shall perform full-time monitoring of construction. Should sediments in a particular area be determined by the paleontologist to be unsuitable for fossil preservation, monitoring shall be suspended in those areas. A paleontologist shall be available to be on call to respond to any unanticipated discoveries and may adjust monitoring based on the construction plans and field visits. • Sediment samples from the Quaternary older alluvium shall be collected and screened for microfossils. • Recovered specimens shall be stabilized and prepared to the point of identification. Specimens shall be identified to the lowest taxonomic level possible and transferred to an accredited repository for curation along with all associated field and lab data. • Upon completion of project excavation, a Paleontological Mitigation Report (PMR) documenting compliance shall be prepared and submitted to the Lead Agency under CEQA.				5. Check periodically as necessary to confirm monitoring occurs in accordance with the PMP. 6. Check to confirm that a paleontologist is on call to respond to unanticipated discoveries. 7. Check to confirm that a PMR has been prepared, upon completion of the project, and submitted to Metro, as the CEQA Lead Agency.	

ATTACHMENT D

CONCEPT DRAWING



Planning and Programming Committee

November 18, 2020

Legistar File 2020-0024, Item# 10

Recommendations

CONSIDER:

A. Approving the East San Fernando Valley Transit Corridor Project (Project), an at-grade Light Rail Transit (LRT) line with 14 stations;

B. Certifying, in accordance with the California Environmental Quality Act, the Final Environmental Impact Report, which includes an option to construct the Project in phases;

C. Adopting, in accordance with CEQA, the:
   1. Findings of Fact and Statement of Overriding Considerations, and
   2. Mitigation Monitoring and Reporting Plan;

D. Authorizing the Chief Executive Officer to file a Notice of Determination with the Los Angeles County Clerk and the State of California Clearinghouse; and

E. Instructing staff, in coordination with the FTA, to work with the Southern California Regional Rail Authority (SCRRA) and the City of San Fernando to address new issues raised along the 2.5-mile shared railroad ROW.
   - Report back to the Board on any supplemental environmental clearance, design evaluations and associated traffic analysis needed. This will be done prior to proceeding with any construction activities on this section of the alignment.

F. Instructing staff, in coordination with the City of Los Angeles to identify a preferred First/Last Mile parallel bike route to replace the existing bike lanes on Van Nuys Boulevard which would be displaced by the LRT project in the Panorama City and Pacoima communities.
   - Report back to the Board with a plan to provide the replacement bike lanes by the time of the opening of the East SFV Transit Project.

Previous Board Actions and Measure M

> **January 2013 -** Alternatives Analysis Study completed focused on a North South BRT extension of Metro Orange Line. Community expressed preference for rail. Studies for rail and bus proceed but funding is not available for rail

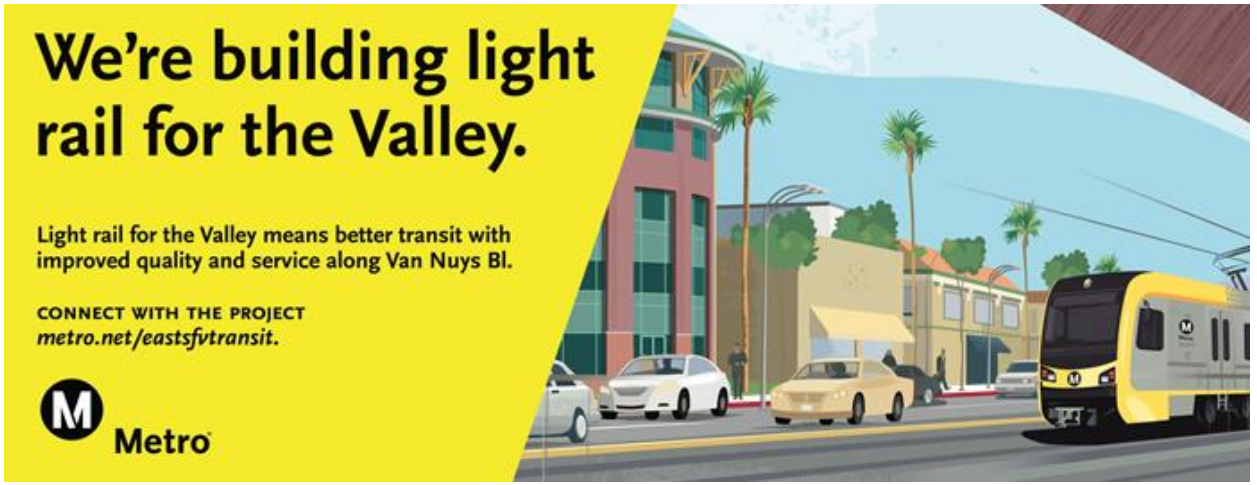
> **November 2016** - Voters approve Measure M, with $1.3 billion available for the Project. FTA agrees to proceed with environmental review including LRT

> **June 2018** - Board selects LPA as At-grade LRT with the Rail Maintenance and Storage Facility Option B and directs additional following studies:

- G Line (Orange) / ESFVTC Connection Study
- Grade Crossing Safety Study

Metro

FEIS/R Outreach



Virtual Meetings – approximately 800 total participants:

> Hosted two community meetings
> Fifteen (15) presentations to community stakeholder groups

Meeting Notifications:

> More than 400 bus car cards displayed on Metro buses
> Two rounds of 20,000 flyers delivered door-to-door
> Eblasts sent to over 3,400 contacts in the Project's stakeholder database
> Posted on NextDoor, sent to 280,000 residential accounts
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Other Key Environment Issues Addressed

> **Traffic**

- Replacement of 2 Mixed-Flow Traffic Lanes with LRT Transit Lanes
- Loss of On-Street Parking

> **Construction**

- Noise and Vibration, Air Quality
- Temporary Traffic Detours and Haul Routes

> **Community Plans**

- Elimination of Bike Lane Locations in Corridor

> **Real Estate Acquisitions**

- Land Required for Rail Storage & Maintenance Facility

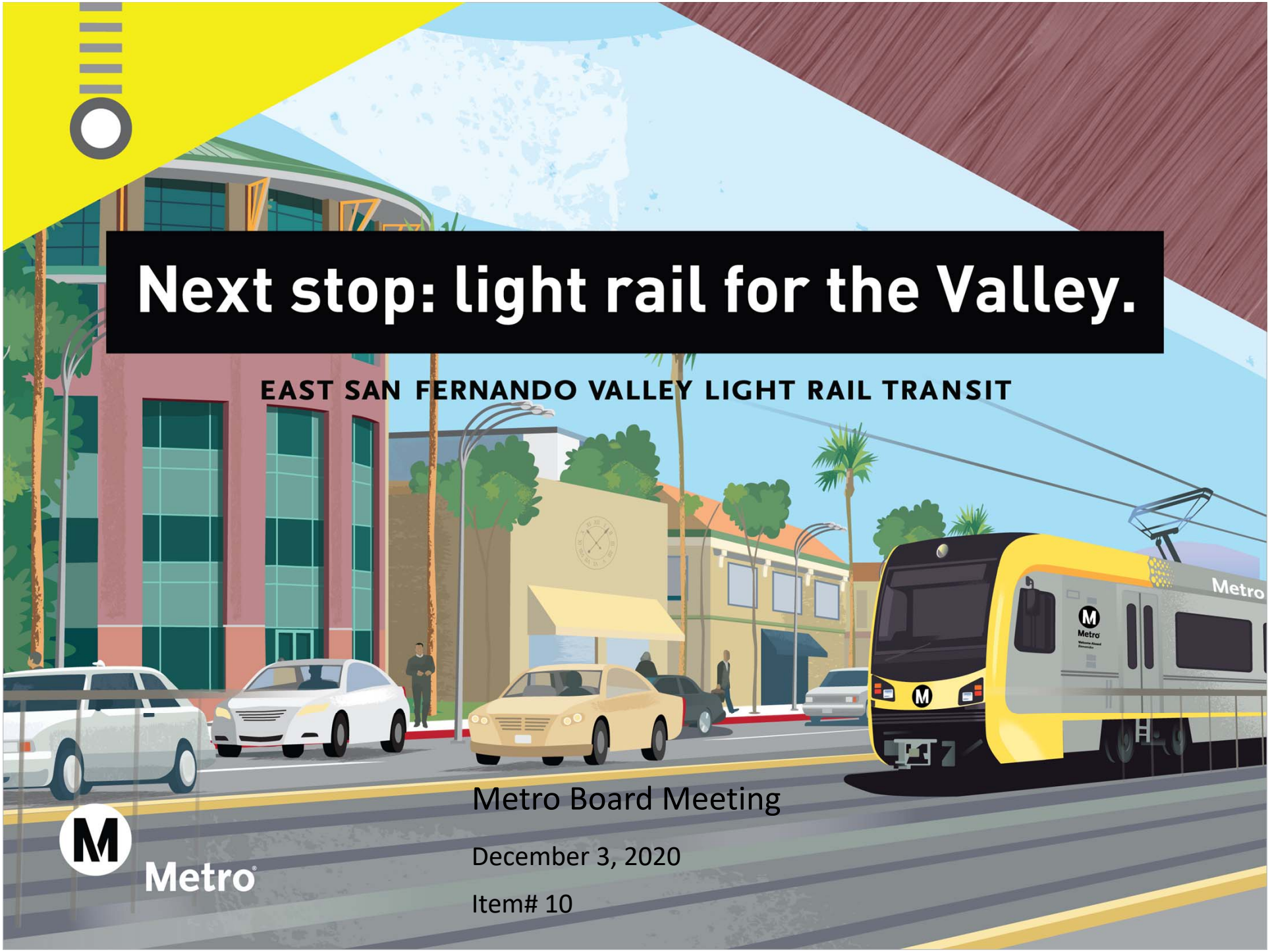
> **Business Impacts**

- Construction

Next Steps

- Advance Engineering to 30% Design
- Work with FTA, SCRRA and the City of San Fernando to identify needed supplemental analysis
- Return to the Board for budget and authorization to complete supplemental analysis
- Initiate work on right of way acquisition and utility relocation
- Advance work on FLM Plan including parallel bike paths

Metro



Metro Board Meeting

December 3, 2020

Item# 10

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