SEPULVEDA TRANSIT CORRIDOR PROJECT

Draft Environmental Impact Report Executive Summary

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Metro®

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EXECUTIVE SUMMARY

Pursuant to the California Environmental Quality Act (CEQA) Guidelines Section 15123, this Executive Summary provides a synopsis of the Draft Environmental Impact Report (DEIR) for the Los Angeles County Metropolitan Transportation Authority (Metro) Sepulveda Transit Corridor Project (Project).

ES-1 Purpose of the Project

The Sepulveda Corridor is a vital link for the communities of greater Los Angeles, connecting residents in the San Fernando Valley to the Westside's bustling employment hubs and cultural landmarks, such as Westwood, UCLA, and Century City. For many families, workers, and students, this route is key to accessing jobs, education, and opportunities that shape daily life. More than just a major travel route, the corridor serves as an essential connection for people across western Los Angeles County, helping them bridge neighborhoods and access vital resources in a region that is ever-growing and increasingly interconnected.

The natural barrier created by the Santa Monica Mountains makes traveling between the San Fernando Valley and the Westside difficult and slow. Interstate 405 (I-405) through the Sepulveda Pass is one of the most congested corridors in the country, and transit service between the San Fernando Valley and the Westside is limited. Each weekday, more than 400,000 trips cross the Sepulveda Pass (Metro, 2019a), and a typical San Fernando Valley commuter loses 59 hours per year to traffic delays just from the evening drive home on I-405 between Wilshire Boulevard and Ventura Boulevard (INRIX, 2024).

The Project would add a critical regional connection to the transportation network, linking the San Fernando Valley with the Westside and providing a reliable, fast alternative to the congested 405 freeway. The Project would:

- Connect the San Fernando Valley—where more than 1.8 million people live—and the rest of the region to major destinations and job centers, including UCLA, Westwood, and Century City. Each day 86,000 students, faculty, staff, and visitors travel to the UCLA campus (UCLA, 2023), and more than 50,000 people work in Century City (SCAG, 2024)
- Leverage other existing and planned transit investments to improve accessibility and mobility by providing Angelenos a north-south link between major transit lines, including the Metrolink Ventura County Line, the Metro East San Fernando Valley Light Rail Line, and the Metro D, E, and G Lines, as shown on Figure ES-1
- Increase economic output in the Los Angeles region by $25.5 billion to $42.9 billion, generating $7.3 billion to $12.1 billion in additional wages (Metro, 2025)

Figure ES-1. Sepulveda Transit Corridor Project Study Area

Source: HTA, 2024

Traffic congestion in the Project Study Area (shown on Figure ES-1) is likely to continue to deteriorate, with the number of trips forecast to grow approximately 17 percent by 2042 and 24 percent by 2057 (Metro, 2019a). Improvements in mobility are needed in the corridor.

The Project would:

- Expand mobility with a fast and dependable rail option that could attract approximately 63,000 to 124,000 daily riders
- Result in time savings for riders traveling between the San Fernando Valley and the Westside—a trip that is currently about 40 to 80 minutes by car and unreliable due to unpredictable traffic conditions would take 18 to 33 minutes on transit
- Attract 20,000 to 42,000 new daily transit riders by serving an area underserved by existing transit infrastructure
- Provide mobility options that may result in reduction in vehicles miles traveled by an estimated 342,000 to 775,000 each day, reducing air pollution and providing health and economic productivity benefits

ES-2 Purpose of the Draft Environmental Impact Report

The DEIR satisfies the requirements of CEQA and the CEQA Guidelines to inform decision-makers and the public about the potential significant environmental impacts of constructing and operating the Project. This DEIR is an informational public document that discloses any significant environmental impacts of the Project as well as identifies ways to reduce or avoid their effects on the environment. The DEIR also identifies reasonable alternatives to the Project, as well as an environmentally superior alternative. Metro is the CEQA lead agency for the Project. Lead agencies are charged with the duty to avoid or substantially lessen significant environmental impacts of a project, where feasible. Metro will use this DEIR to consider the environmental consequences of the Project when identifying a Locally Preferred Alternative (LPA) and deciding whether to approve the Project.

ES-3 Project Background and History

In 2016, the voters of Los Angeles County approved Measure M, the Los Angeles County Traffic Improvement Plan, to fund transportation improvements throughout the county. The *Measure M Expenditure Plan* (Metro, 2016) included the Sepulveda Transit Corridor, which was defined as a transit project between the Metro G Line in the San Fernando Valley (Valley) and Westwood.

ES-3.1 Sepulveda Transit Corridor Feasibility Study

In 2019, Metro completed the Sepulveda Transit Corridor Feasibility Study (Feasibility Study) and released the *Sepulveda Transit Corridor Project Final Feasibility Report* (Metro, 2019a), which documented the transportation conditions and travel patterns in the Sepulveda Corridor; identified mobility problems affecting travel between the Valley, the Westside of Los Angeles (Westside), and the Los Angeles International Airport (LAX) area; and defined initial goals and objectives, and a Purpose and Need of the corridor. The Feasibility Study determined that a reliable, high-capacity fixed-guideway transit system connecting the Valley to the Westside could be constructed along several different alignments using either heavy-rail transit (HRT) or monorail transit (MRT) technology. The Feasibility Study evaluated four alternatives including three HRT options and one MRT option. Based on the *Sepulveda Transit Corridor Project Final Feasibility Report* and proposals resulting from Metro's pre-

development agreement (PDA) process, the Metro Board selected alternatives to be included in the environmental process.

ES-3.2 Pre-Development Agreements

At its July 2019 meeting, the Metro Board approved a PDA approach to support the Project's development and approved the procurement of PDA contracts for the Project. The PDA process allows for early contractor involvement in project design through the development of independently proposed alternatives. In October 2019, Metro issued a request for proposals for the performance of PDA work for the Project (Metro, 2019b). Firms were encouraged to propose innovative "transit solution concepts" (TSC) that best met the Project's goal of providing transit service between the Valley and Westside. All potential PDA contractors were required to propose concepts that met the Purpose and Need, goals, and objectives established in the *Sepulveda Transit Corridor Project Final Feasibility Report* (Metro, 2019a). Metro staff recommended selection of the two highest scoring proposals: a proposal by LA SkyRail Express (LASRE) with a TSC operating along an entirely aerial alignment using MRT technology within the Interstate 405 (I-405) right-of-way (ROW), and a proposal by Sepulveda Transit Corridor Partners (STCP) with a TSC operating along a mixed underground-aerial alignment using driverless HRT technology. The Metro Board voted to approve PDA contracts with LASRE and STCP at their March 2021 meeting.

ES-3.3 Alternatives Included in the Notice of Preparation

Between March and October 2021, LASRE and STCP developed "project concept alternatives" based on the TSCs included in their proposals that addressed public comments received at the March Board meeting. The following six alternatives were included in the Notice of Preparation (NOP) for the Project released in November 2021 (Metro, 2021):

- Alternative 1: Monorail with aerial alignment in the I-405 corridor and an electric bus connection to University of California, Los Angeles (UCLA)
- Alternative 2: Monorail with aerial alignment in the I-405 corridor and an aerial Automated People Mover (APM) connection to UCLA
- Alternative 3: Monorail with aerial alignment in the I-405 corridor and underground alignment between the Getty Center and Wilshire Boulevard
- Alternative 4: Heavy rail with underground alignment south of Ventura Boulevard and aerial alignment generally along Sepulveda Boulevard in the San Fernando Valley
- Alternative 5: Heavy rail with underground alignment including along Sepulveda Boulevard in the San Fernando Valley
- Alternative 6: Heavy rail with underground alignment including along Van Nuys Boulevard in the San Fernando Valley and a southern terminus station on Bundy Drive

Alternatives 1 through 3 were proposed by LASRE, Alternatives 4 and 5 were proposed by STCP, and Alternative 6 was designed by HTA Partners at Metro's direction.

ES-3.3.1 Alternatives Considered and Withdrawn

In October 2023, LASRE requested the removal of Alternative 2 from further consideration in the environmental process. Alternative 2 was a monorail alternative that included an APM connection to UCLA. Metro concurred with LASRE's request for removal of Alternative 2 based on staff's independent,

environmental perspective that Alternative 2 did not provide advantages over other alternatives. In July 2024, following community meetings held in May 2024 dedicated to gathering feedback on the monorail alternatives, Alternative 2 was removed from further consideration in the environmental process with the understanding that the remaining alternatives represent a sufficient range of alternatives for environmental review, inclusive of transit modes and routes (Metro, 2024).

ES-4 Project Goals and Objectives

The goals and objectives of the Project are described in Chapter 2, Project Description, and are summarized in Table ES-1.

Table ES-1. Goals and Objectives

Goals and Objectives
Improve Mobility
1. Increase transit frequency and decrease travel time
2. Increase transit ridership
3. Prioritize connections to high-traffic points of interest
4. Promote efficiency of transfer experience to fixed and non-fixed guideway systems
5. Support non-automobile First-Last Mile connections
Improve Accessibility and Promote Equity
1. Improve access for Equity Focus Communities (EFC)
2. Target infrastructure and service investments towards those with the greatest mobility needs
Support Community and Economic Development
1. Increase opportunity for economic growth around stations
2. Minimize physical barriers to communities created by the Project
3. Prioritize station placement and design that is consistent with community context
Protect Environmental Resources and Support a Sustainable Transportation System
1. Reduce vehicle miles traveled (VMT)
2. Reduce greenhouse gas emissions
3. Reduce air pollutant emissions
4. Minimize impacts to environmental resources
Provide a Cost-Effective Solution and Minimize Risk
1. Maximize benefits to the public relative to cost
2. Maximize potential eligibility for state and federal funding opportunities
3. Provide an affordable transit solution
Enhance Resiliency
1. Provide resilience to natural disasters and climate change

Source: Metro, 2021

ES-5 Environmental Review Process

Pursuant to CEQA, Metro issued an NOP for this DEIR in November 2021 (Metro, 2021). The purpose of the NOP was to notify responsible agencies, trustee agencies, and other interested agencies and parties, local jurisdictions, community organizations, and interested residents of the preparation of the DEIR. The NOP, as well as the scoping comment letters and verbal comments, are included in Appendix V, of this DEIR.

In accordance with Section 15088 of the CEQA Guidelines, after the public review and comment period, written responses to all written comments and oral testimony pertaining to significant environmental

issues received during the comment period will be prepared as part of the Final Environmental Impact Report (FEIR).

The DEIR and the comments received during the public review period will inform the Metro Board (along with other factors including engineering and cost) in the identification of an LPA from the alternatives evaluated. The Metro Board will vote at a public meeting to select an LPA. Once the LPA is identified by the Metro Board, the content of any further environmental evaluation in the FEIR will be focused on the LPA. However, all comments received on all alternatives evaluated in the DEIR will be responded to and published as part of the FEIR. As required by CEQA, responses to comments submitted by commenting agencies will be distributed to those agencies for review prior to consideration of the FEIR by the Metro Board. Pursuant to Sections 15090 to 15093 of the CEQA Guidelines, upon completion of the FEIR and other required documentation, the Metro Board may certify the FEIR, adopt findings relative to the Project's environmental effects after implementation of mitigation measures, provide a statement of overriding considerations, (if necessary) and consider approval of the Project. Should the Project be approved, a Notice of Determination would be filed with the State Clearinghouse.

ES-6 Project Alternatives

The project alternatives consist of a No Project Alternative, MRT alternatives (Alternatives 1 and 3), driverless HRT alternatives (Alternatives 4 and 5), and a driver-operated HRT alternative (Alternative 6). Under CEQA, evaluation of the No Project Alternative must consider both the existing conditions at the time the NOP was published (Metro, 2021) and what would reasonably be expected to occur in the foreseeable future if the Project is not approved.

Among the five project alternatives described in this DEIR, the Proposed Project is Alternative 6. Alternative 6 is consistent with the description of the Sepulveda Transit Corridor Project as presented to the public when Measure M was passed. In addition, the proposed design, construction, and operation of Alternative 6 are familiar to the Metro Board of Directors and the public, as they would be similar to Metro's existing heavy rail transit lines. In this DEIR, all alternatives, including the Proposed Project, are evaluated equally to provide a comprehensive analysis of potential environmental impacts. Consistent with CEQA Guidelines Section 15126.6(d) the Proposed Project provides a stable basis upon which to evaluate the comparative merits of all of the alternatives. However, as permitted under CEQA, the Metro Board may select an alternative other than Alternative 6 as the LPA based on findings from the DEIR, public comments received during the comment period, technical analyses, stakeholder input, and other factors such as project objectives, cost, and ridership. Because all alternatives have been evaluated in equal detail, identifying Alternative 6 as the Proposed Project ensures a stable and finite project description while allowing the Metro Board flexibility to select the most suitable alternative for implementation.

The following sections describe the technology currently proposed for each alternative. The details of the technology may be refined as design progresses.

ES-6.1 No Project Alternative

The only transportation project under the No Project Alternative that is a reasonably foreseeable consequence of not approving the Project would be improvements to Metro Line 761, which would continue to serve as the primary transit option through the Sepulveda Pass, with improved peak-period headways of 10 minutes in the peak direction and 15 minutes in the other direction. Metro Line 761 would operate between the Metro E Line Expo/Sepulveda Station and the Metro G Line Van Nuys

Station to connect with the East San Fernando Valley Light Rail Transit Line, rather than maintaining its current northern terminus at the Sylmar Metrolink Station.

ES-6.2 Monorail Transit Alternatives (Alternatives 1 and 3)

Alternatives 1 and 3 would use MRT technology, in which the monorail train sits atop a single concrete beam. Monorail trains would consist of up to eight cars measuring 10.5 feet wide, with two double doors on each side. End cars would be 46.1 feet long with capacity for 97 passengers, and intermediate cars would be 35.8 feet long with capacity for 90 passengers. Trains would be driverless and powered by rails mounted to the guide beam. Rubber tires would sit both atop and on each side of the guide beam to provide traction and guide the train. MRT alternatives would have a maximum operating speed of 56 miles per hour with planned peak-period headways of 166 seconds and off-peak-period headways of 5 minutes. The peak periods are defined as 6:00am to 9:00am and 3:00pm to 7:00pm.

The MRT alternatives would utilize straddle-beam monorail technology, which would allow the monorail vehicle to straddle a guide beam that both supports and guides the vehicle. Northbound and southbound trains would travel on parallel beams. In aerial segments, the two beams would be supported by either a single-column or a straddle-bent structure. In underground segments (in Alternative 3 only), the two beams would be in a single tunnel.

Aerial monorail station platforms would be approximately 320 feet long, elevated 50 to 75 feet above the existing ground level. Aerial station platforms would be covered, but not enclosed. Aerial station platforms would be supported by six rows of dual 5-by-8-foot columns. Side platform stations would measure 61.5 feet in width to accommodate two 13-foot-wide station platforms with a 35.5-foot-wide intermediate gap for side-by-side trains. Center platform stations would measure 49 feet in width, with a 25-foot-wide center platform. Each station, regardless of whether it has side or center platforms, would include a concourse level prior to reaching the train platforms. Each station would have a minimum of two elevators, two escalators, and one stairway between every level. Fare gates would demarcate the fare paid zones of stations.

Alternative 3 includes two underground MRT stations with platforms approximately 320 feet long. Underground stations would be 80 to 110 feet underneath the existing ground level. The underground stations would be side-platform stations where passengers would select and travel down to station platforms depending on their direction of travel. Underground side-platforms would measure 320 feet long, 26 feet wide, separated by a distance of 31.5 feet for side-by-side trains. Each station would include a concourse level prior to reaching the train platforms. Each station would have a minimum of two elevators, two escalators, and one stairway between every level.

Monorail stations would include automatic, bi-parting fixed doors along the edges of station platforms. These gates would be integrated into the automatic train control system and would not open unless a train is stopped at the platform.

There are two maintenance storage facility (MSF) site options under consideration for each of the MRT alternatives—the MSF Base Design and MSF Design Option 1. In the MSF Base Design, the MSF would be located on the City of Los Angeles Department of Water and Power (LADWP) property east of the Van Nuys Metrolink Station. The MSF Base Design site would be approximately 18 acres and would be designed to accommodate a fleet of 208 monorail vehicles. The site would be bounded by the Los Angeles-San Diego-San Luis Obispo (LOSSAN) rail corridor to the north, Saticoy Street to the south, and property lines extending north of Tyrone and Hazeltine Avenues to the west and east, respectively.

The MSF Design Option 1 would be located on industrial property, abutting Orion Avenue, south of the LOSSAN rail corridor. The MSF Design Option 1 site would be approximately 26 acres and would be designed to accommodate a fleet of 224 monorail vehicles. The site would be bounded by I-405 to the west, Stagg Street to the south, the LOSSAN rail corridor to the north, and Orion Avenue and Raymer Street to the east. The monorail guideway would travel along the northern edge of the site.

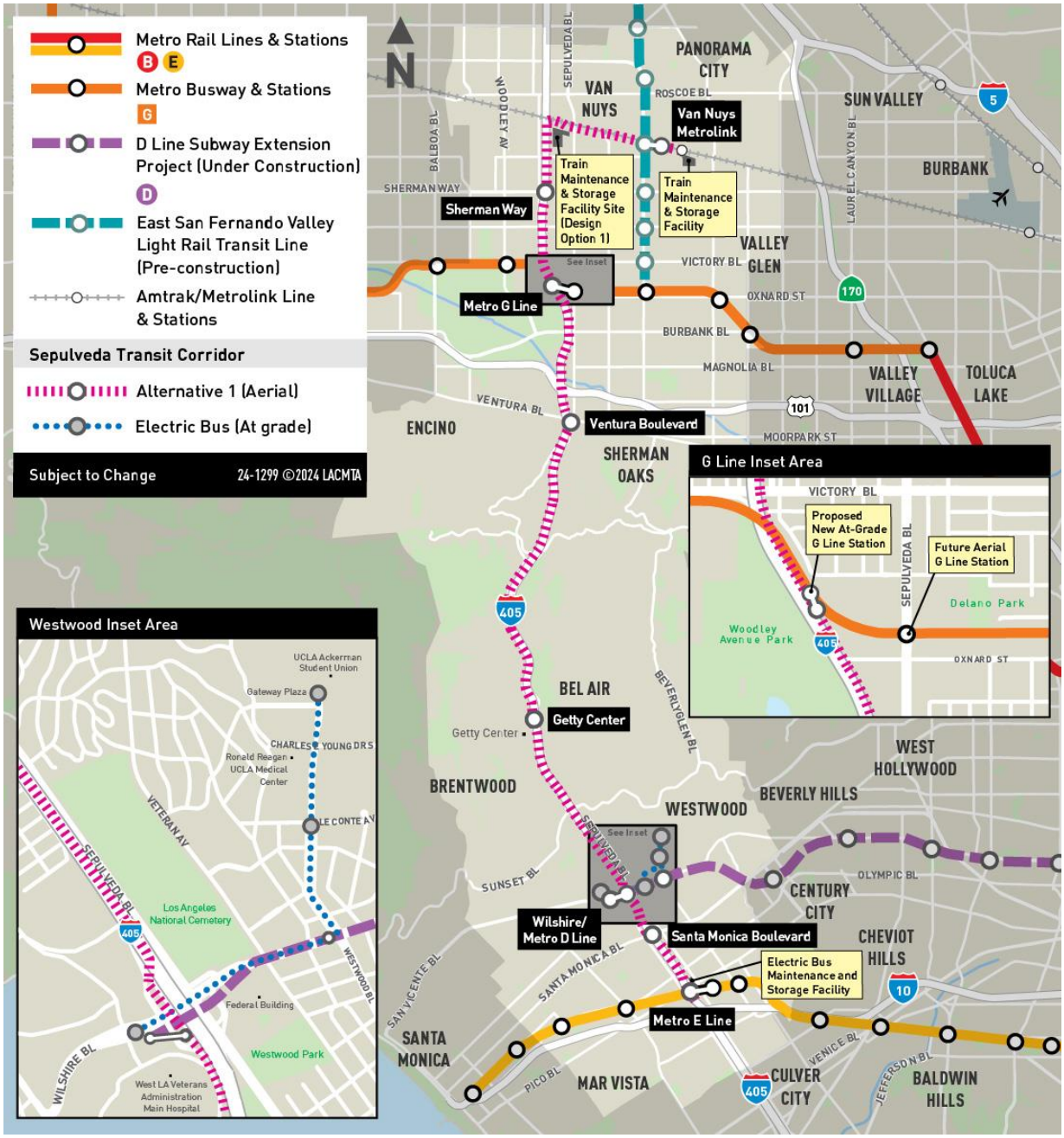
ES-6.2.1 Alternative 1

As shown on Figure ES-2, Alternative 1 would be a 15.1-mile long MRT alignment operating between a southern terminus station adjacent to the Metro E Line Expo/Sepulveda Station and a northern terminus station adjacent to the Van Nuys Metrolink/Amtrak Station. The monorail guideway would be entirely aerial and generally located within the I-405 ROW and then adjacent to the LOSSAN rail corridor tracks between I-405 and the Van Nuys Metrolink Station. To accommodate the monorail guideway within the I-405 corridor, widening of the freeway would be required at some locations, and some freeway ramps and local roads would be realigned or relocated. Alternative 1 would have eight aerial monorail stations: Metro E Line Expo/Sepulveda, Santa Monica Boulevard, Wilshire Boulevard/Metro D Line, Getty Center, Ventura Boulevard/Sepulveda Boulevard, Metro G Line Sepulveda, Sherman Way, and the Van Nuys Metrolink Station. Alternative 1 end-to-end travel time (including dwell time) would be approximately 28 minutes.

At Wilshire Boulevard, an aerial station would be located on the west side of I-405, and an electric bus shuttle would provide service along a 1.5-mile route between the Metro D Line Westwood/VA Hospital Station and UCLA Gateway Plaza, with an intermediate stop at Westwood Boulevard/Le Conte Avenue. The electric bus shuttle would operate at headways of 2 minutes during peak periods. An MSF for monorail vehicles would be located either west of Sepulveda Boulevard south of the LOSSAN rail corridor tracks or on property owned by LADWP east of the Van Nuys Metrolink Station. An Electric Bus MSF would be located at the northwest corner of Pico Boulevard and Cotner Avenue and would be designed to accommodate 14 electric buses. The site would be approximately 2 acres and would comprise six parcels bounded by Cotner Avenue to the east, I-405 to the west, Pico Boulevard to the south, and the I-405 northbound on-ramp to the north. Electric bus charging would occur at the Electric Bus MSF.

Alternative 1 proposes 13 traction power substation (TPSS) locations.

Figure ES-2. Alternative 1 Alignment



Source: LASRE, 2024; HTA, 2024

ES-6.2.2 Alternative 3

As shown on Figure ES-3, Alternative 3 would be a 16.1-mile long MRT alignment operating between a southern terminus station adjacent to the Metro E Line Expo/Sepulveda Station and a northern terminus station adjacent to the Van Nuys Metrolink/Amtrak Station. The monorail guideway would be aerial for most of the alignment, with a 3.6-mile tunnel segment between the Getty Center and Wilshire Boulevard. The aerial alignment would generally be located within the I-405 ROW and then adjacent to the LOSSAN rail corridor tracks between I-405 and the Van Nuys Metrolink Station. Alternative 3 would have seven aerial monorail stations—Metro E Line Expo/Sepulveda, Santa Monica Boulevard, Getty Center, Ventura Boulevard/Sepulveda Boulevard, Metro G Line Sepulveda, Sherman Way, and the Van Nuys Metrolink Station—along with two underground monorail stations at Wilshire Boulevard/Metro D Line and UCLA Gateway Plaza. Alternative 3 end-to-end travel time (including dwell time) would be approximately 33 minutes.

South of Santa Monica Boulevard and north of the Getty Center, the alignment of Alternative 3 would be the same as that of Alternative 1. North of Santa Monica Boulevard, the alignment would diverge from the I-405 median and transition to below grade along the south edge of the Federal Building property. It would turn north under Veteran Avenue toward the proposed Wilshire Boulevard/Metro D Line Station and then travel underneath Westwood Village to an underground station at UCLA Gateway Plaza before returning to the I-405 corridor just south of the proposed Getty Center Station. An MSF for monorail vehicles would be located either west of Sepulveda Boulevard south of the LOSSAN rail corridor tracks or on property owned by LADWP east of the Van Nuys Metrolink/Amtrak Station. To accommodate the monorail guideway within the I-405 corridor, widening of the freeway would be required at some locations, and some freeway ramps and local roads would be realigned, relocated, or removed.

Alternative 3 proposes 14 TPSS locations.

Figure ES-3. Alternative 3 Alignment

Source: LASRE, 2024; HTA, 2024

ES-6.3 Driverless Heavy-Rail Transit Alternatives (Alternatives 4 and 5)

Alternatives 4 and 5 would use driverless HRT technology. HRT trains would consist of three or four cars measuring approximately 10 feet wide with three double doors on each side and open gangways between cars. Each car would be approximately 72 feet long with capacity for 170 passengers. Trains would be powered by a third rail. Driverless HRT alternatives would have a maximum operating speed of 70 miles per hour with planned peak-period headways of 2.5 minutes and off-peak-period headways ranging from 4 to 6 minutes.

For underground sections, Alternatives 4 and 5 would utilize a single-bore tunnel configuration with an outside diameter of 43.5 feet. The tunnel would include two parallel tracks with 18.75-foot track spacing in tangent sections separated by a continuous central dividing wall throughout the tunnel. Inner walkways would be constructed adjacent to the two tracks. Inner and outer walkways would be constructed within tunnel sections near the track crossovers. In aerial sections, the guideway would be supported by either single columns or straddle bents.

HRT stations—both aerial and underground—would be side-platform stations where passengers would select and travel to station platforms, depending on their direction of travel. Station platforms would be approximately 280 feet long, with 20-foot-wide side platforms separated by 30 feet for side-by-side trains. Each underground station would include an upper and lower concourse level prior to reaching the train platforms. Aerial stations would be constructed a minimum of 15.25 feet above ground level, supported by rows of dual columns with 8-foot diameters. Aerial station platforms would be covered, but not enclosed. Each aerial station, except for the Sherman Way Station under Alternative 4, would include a mezzanine level prior to reaching the station platforms where passengers would travel up to platforms, depending on their direction of travel. At the Sherman Way Station under Alternative 4, separate entrances on opposite sides of the street would provide access to either the northbound or southbound platform with an overhead pedestrian walkway providing additional connectivity across platforms. Each station would have a minimum of two elevators, two escalators, and one stairway between every level. Fare gates would demarcate the fare paid zones of stations.

The MSF for the driverless HRT alternatives would be located east of the Van Nuys Metrolink Station and would encompass approximately 46 acres. The MSF would be designed to accommodate 184 rail cars and would be bounded by single-family residences to the south, the LOSSAN rail corridor ROW to the north, Woodman Avenue on the east, and Hazeltine Avenue and industrial manufacturing enterprises to the west. Trains would access the site from the fixed guideway's tail tracks at the northwest corner of the site. Trains would then travel southeast to maintenance facilities and storage tracks.

ES-6.3.1 Alternative 4

As shown on Figure ES-4, Alternative 4 would be a 13.9-mile long HRT alignment operating between a southern terminus station adjacent to the Metro E Line Expo/Sepulveda Station and a northern terminus station adjacent to the Van Nuys Metrolink/Amtrak Station. The alignment would be underground between the southern terminus and a portal south of Ventura Boulevard in the San Fernando Valley. Between this portal and Ventura Boulevard, the guideway would be aerial on the east side of I-405. North of Ventura Boulevard, the guideway would generally be located above Sepulveda Boulevard until curving southeast to parallel the LOSSAN rail corridor tracks. Alternative 4 end-to-end travel time (including dwell time) would be approximately 20 minutes.

Alternative 4 would have four underground stations at Metro E Line Expo/Sepulveda, Santa Monica Boulevard, Wilshire Boulevard/Metro D Line, and UCLA Gateway Plaza, and four aerial stations at Ventura Boulevard/Sepulveda Boulevard, Metro G Line Sepulveda, Sherman Way, and the Van Nuys Metrolink Station. An MSF for HRT vehicles would be located west of Woodman Avenue south of the LOSSAN rail corridor tracks.

Alternative 4 proposes 12 TPSS locations.

Figure ES-4. Alternative 4 Alignment

Source: STCP, 2024; HTA, 2024

ES-6.3.2 Alternative 5

As shown on Figure ES-5, Alternative 5 would be a 13.8-mile long HRT alignment operating between a southern terminus station adjacent to the Metro E Line Expo/Sepulveda Station and a northern terminus station adjacent to the Van Nuys Metrolink/Amtrak Station. The alignment would be underground between the southern terminus and a tunnel portal east of Sepulveda Boulevard and south of Raymer Street in the San Fernando Valley. As it approaches the tunnel portal, the alignment would curve southeast and begin to transition to an aerial guideway along the south side of the LOSSAN rail corridor. Alternative 5 end-to-end travel time (including dwell time) would be approximately 20 minutes.

Alternative 5 would have seven underground stations and one aerial station at Van Nuys Metrolink Station. Alternative 5 would have four underground stations (Metro E Line Expo/Sepulveda, Santa Monica Boulevard, Wilshire Boulevard/Metro D Line, UCLA Gateway Plaza), and one aerial station at Van Nuys Metrolink identical to those under Alternative 4. Three unique underground stations at Ventura Boulevard/Sepulveda Boulevard, Metro G Line Sepulveda, and Sherman Way are proposed for Alternative 5. An MSF for HRT vehicles would be located west of Woodman Avenue south of the LOSSAN rail corridor tracks.

Alternative 5 proposes 12 TPSS locations.

Figure ES-5. Alternative 5 Alignment

Source: STCP, 2024; HTA, 2024

ES-6.4 Driver-Operated Heavy-Rail Transit Alternative

Alternative 6 would use driver-operated HRT technology similar to the Metro B and D Lines. HRT trains would consist of four cars (during the off-peak period) or six cars (during the peak period) measuring 10.3 feet wide with three double doors on each side. Each car would be approximately 75 feet long with capacity for 133 passengers. Trains would be powered by a third rail. Driver-operated HRT would have a maximum operating speed of 67 miles per hour with planned peak headways of 4 minutes and off-peak-period headways ranging from 8 to 20 minutes.

Alternative 6 would use Metro's standard twin-bore tunnel design. Cross-passages would be constructed at regular intervals in accordance with Metro Rail Design Criteria. Each of the tunnels would have a diameter of 19 feet (not including the thickness of wall). Each tunnel would include an emergency walkway that measures a minimum of 2.5 feet wide for evacuation.

Alternative 6 would include seven underground stations with station platforms measuring 450 feet long. The southern terminus station would be adjacent to the existing Metro E Line Expo/Bundy Station, and the northern terminus station would be located south of the existing Van Nuys Metrolink/Amtrak Station. Except for the Wilshire Boulevard/Metro D Line, UCLA Gateway Plaza, and Metro G Line Van Nuys Stations, all stations would have a 30-foot-wide center platform. The Wilshire/Metro D Line Station would have a 32-foot-wide platform to accommodate the anticipated passenger transfer volumes, and the UCLA Gateway Plaza Station would have a 28-foot-wide platform because of the width constraint between the existing buildings. At the Metro G Line Van Nuys Station, the track separation would increase significantly in order to straddle the future East San Fernando Valley Light Rail Transit Line station piles. The platform width at this station would increase to 58 feet.

Each station would have a minimum of two elevators, two escalators, and one stairway between every level. Fare gates would demarcate the fare paid zones of stations.

The MSF for Alternative 6 would be located east of the Van Nuys Metrolink Station and would encompass approximately 41 acres. The MSF would be designed to accommodate 94 vehicles and would be bounded by single-family residences to the south, the LOSSAN rail corridor ROW to the north, Woodman Avenue to the east, and Hazeltine Avenue and industrial manufacturing enterprises to the west. Heavy rail trains would transition from underground to an at-grade configuration near the northwest corner of the site. Trains would then travel southeast to maintenance facilities and storage tracks.

ES-6.4.1 Alternative 6 (Proposed Project)

As shown on Figure ES-6, the Proposed Project, Alternative 6, would be a 12.9-mile long HRT alignment operating between a southern terminus station adjacent to the Metro E Line Expo/Bundy Station and a northern terminus station adjacent to the Van Nuys Metrolink/Amtrak Station. The alignment would be entirely underground through the Westside, the Santa Monica Mountains, and the San Fernando Valley. The proposed southern terminus station would be located beneath the Bundy Drive and Olympic Boulevard intersection. The Van Nuys Metrolink Station would serve as the northern terminus station and would be located between Saticoy Street and Keswick Street. North of the station, a yard lead would turn sharply to the southeast and transition to an at-grade configuration and continue to the proposed MSF east of the Van Nuys Metrolink Station. Alternative 6 end-to-end travel time (including dwell time) would be approximately 18 minutes.

Alternative 6 would have seven underground stations at Metro E Line Expo/Bundy, Santa Monica Boulevard, Wilshire Boulevard/Metro D Line, UCLA Gateway Plaza, Ventura Boulevard/Van Nuys Boulevard, Metro G Line Van Nuys, and the Van Nuys Metrolink Station.

Alternative 6 proposes 22 TPSS locations.

Figure ES-6. Alternative 6 Alignment

Source: HTA, 2024

ES-7 Summary of Environmental Analysis

This DEIR identifies potential environmental impacts for each project alternative and MSF and discusses mitigation measures that would avoid or substantially reduce significant impacts to less than significant levels, where feasible. Mitigation measures are required where significant impacts have been identified. If mitigation measures cannot reduce a significant impact to a less than significant level, an impact is identified as significant and unavoidable. Chapter 3, Environmental Analysis, of this DEIR provides a detailed analysis of impacts by environmental resource, applicable mitigation measures, and level of significance after mitigation.

ES-7.1 Project Alternatives

ES-7.1.1 Potentially Significant Impacts and Less Than Significant Impacts with Mitigation

Table ES-2 summarizes the environmental resources that would result in potentially significant impacts and applicable mitigation measures for each alternative. Descriptions of the mitigation measures are provided in Table ES-5 in Section ES-7.3. Environmental resource topics that have no impact or a less than significant impact are not shown in the table and are discussed in Section ES-7.1.2.

Table ES-2. Summary of Potentially Significant Impacts Before and After Mitigation for the Project Alternatives

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
		LTS = Less than Significant PS = Potentially Significant			NI = No Impact SU = Significant and Unavoidable		
Aesthetics Operational Impacts							
Impact AES-3: Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vintage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Impacts Before Mitigation	NI	LTS	LTS	SU	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	SU	LTS	LTS
Aesthetics Construction Impacts							
Impact AES-3: Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vintage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Impacts Before Mitigation	NI	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM AES-1	MM AES-1	MM AES-1	MM AES-1	MM AES-1
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Air Quality Construction Impacts							
Impact AQ-2: Would the project result in cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under and applicable federal or state ambient air quality standard?	Impacts Before Mitigation	LTS	**SU**	**SU**	**SU**	**SU**	**SU**
	Applicable Mitigation	NA	MM AQ-1 through MM AQ-3	MM AQ-1 through MM AQ-3	MM AQ-1 through MM AQ-3	MM AQ-1 through MM AQ-3	MM AQ-1 through MM AQ-3
	Impacts After Mitigation	LTS	**SU**	**SU**	**SU**	**SU**	**SU**
	Impacts Before Mitigation	LTS	**SU**	**SU**	**SU**	**SU**	**SU**

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
		LTS = Less than Significant PS = Potentially Significant			NI = No Impact SU = Significant and Unavoidable		
Impact AQ-3: Would the project expose sensitive receptors to substantial pollutant concentrations?	Applicable Mitigation	NA	MM AQ-1 through MM AQ-3	MM AQ-1 through MM AQ-3	MM AQ-1 through MM AQ-3	MM AQ-1 through MM AQ-3	MM AQ-1 through MM AQ-3
	Impacts After Mitigation	LTS	**SU**	**SU**	**SU**	**SU**	**SU**
Biological Resources Operational Impacts							
Impact BIO-1: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM BIO-1 through MM BIO-3	MM BIO-1 through MM BIO-3	MM BIO-1 through MM BIO-3	MM BIO-1 through MM BIO-3	MM BIO-1 through MM BIO-3
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact BIO-2: Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	Impacts Before Mitigation	LTS	NI	NI	NI	NI	PS
	Applicable Mitigation	NA	NA	NA	NA	NA	MM BIO-10, MM BIO-16 through MM BIO-18, MM BIO-23 through MM BIO-25
	Impacts After Mitigation	LTS	NI	NI	NI	NI	LTS
Impact BIO-4: Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM BIO-1, MM BIO-2, MM BIO-28	MM BIO-1, MM BIO-2, MM BIO-28	MM BIO-1, MM BIO-2	MM BIO-1, MM BIO-2	MM BIO-1, MM BIO-2
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
		LTS = Less than Significant PS = Potentially Significant			NI = No Impact SU = Significant and Unavoidable		
Impact BIO-5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM BIO-3	MM BIO-3	MM BIO-3	MM BIO-3	MM BIO-3
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Biological Resources Construction Impacts							
Impact BIO-1: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM BIO-4 through MM BIO-10, MM BIO-16 through MM BIO-20, MM BIO-22 through MM BIO-27, MM BIO-29	MM BIO-4 through MM BIO-10, MM BIO-16 through MM BIO-20, MM BIO-22 through MM BIO-27, MM BIO-29	MM BIO-4 through MM BIO-10, MM BIO-16 through MM BIO-20, MM BIO-22 through MM BIO-27, MM BIO-29	MM BIO-4 through MM BIO-10, MM BIO-16 through MM BIO-20, MM BIO-22 through MM BIO-27, MM BIO-29	MM BIO-4 through MM BIO-10, MM BIO-17 MM BIO-18, MM BIO-29
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact BIO-2: Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM BIO-10, MM BIO-16 through MM BIO-18, MM BIO-23 through MM BIO-25	MM BIO-10, MM BIO-16 through MM BIO-18, MM BIO-23 through MM BIO-25	MM BIO-10, MM BIO-16 through MM BIO-18, MM BIO-23 through MM BIO-25	MM BIO-10, MM BIO-16 through MM BIO-18, MM BIO-23 through MM BIO-25	MM BIO-10, MM BIO-16 through MM BIO-18, MM BIO-23 through MM BIO-25
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
		LTS = Less than Significant PS = Potentially Significant			NI = No Impact SU = Significant and Unavoidable		
Impact BIO-3: Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Impacts Before Mitigation	LTS	PS	PS	PS	NI	PS
	Applicable Mitigation	NA	MM BIO-15, MM BIO-18, MM BIO-21	MM BIO-15, MM BIO-18, MM BIO-21	MM BIO-15, MM BIO-18, MM BIO-21	NA	MM BIO-15, MM BIO-18, MM BIO-21
	Impacts After Mitigation	LTS	LTS	LTS	LTS	NI	LTS
Impact BIO-4: Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM BIO-4, MM BIO-5, MM BIO-7, MM BIO-14	MM BIO-4, MM BIO-5, MM BIO-7, MM BIO-14	MM BIO-4, MM BIO-5, MM BIO-7, MM BIO-14	MM BIO-4, MM BIO-5, MM BIO-7, MM BIO-14	MM BIO-4, MM BIO-5, MM BIO-7, MM BIO-14
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact BIO-5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM BIO-3, MM BIO-5 through MM BIO-9, MM BIO-14, MM BIO-23	MM BIO-5 through MM BIO-11, MM BIO-14, MM BIO-15, MM BIO-23	MM BIO-5 through MM BIO-10, MM BIO-12, MM BIO-15 through MM BIO-17, MM BIO-20, MM BIO-22, MM BIO-23, MM BIO-26	MM BIO-5 through MM BIO-10, MM BIO-12, MM BIO-15 through MM BIO-17, MM BIO-20, MM BIO-22, MM BIO-23, MM BIO-26	MM BIO-5 through MM BIO-10, MM BIO-13, MM BIO-14
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
		LTS = Less than Significant PS = Potentially Significant			NI = No Impact SU = Significant and Unavoidable		
Cultural Resources Operational Impacts							
Impact CUL-1: Would the project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	Impacts Before Mitigation	NI	PS	LTS	LTS	LTS	LTS
	Applicable Mitigation	NA	MM CUL-2	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Cultural Resources Construction Impacts							
Impact CUL-1: Would the project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM CUL-1 through MM CUL-5	MM CUL-1, MM CUL-4, MM CUL-5	MM CUL-1, MM CUL-4, MM CUL-5	MM CUL-1, MM CUL-4, MM CUL-5	MM CUL-1, MM CUL-4, MM CUL-5
	Impacts After Mitigation	LTS	**SU**	**SU**	**SU**	LTS	**SU**
Impact CUL-2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM CUL-1, MM CUL-6, MM CUL-7	MM CUL-1, MM CUL-6, MM CUL-7	MM CUL-1, MM CUL-6, MM CUL-7	MM CUL-1, MM CUL-6, MM CUL-7	MM CUL-1, MM CUL-,6 MM CUL-7
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact CUL-3: Would the project disturb any human remains, including those interred outside of formal cemeteries?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM CUL-8	MM CUL-8	MM CUL-8	MM CUL-8	MM CUL-8
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Geology, Soils, Seismicity, and Paleontological Resources Construction Impacts							
Impact GEO-3: Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?	Impacts Before Mitigation	LTS	LTS	PS	PS	PS	PS
	Applicable Mitigation	NA	NA	MM GEO-2	MM GEO-2	MM GEO-2	MM GEO-2
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
		LTS = Less than Significant PS = Potentially Significant			NI = No Impact SU = Significant and Unavoidable		
Impact GEO-5: Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM GEO-1 through MM GEO-5	MM GEO-1 through MM GEO-5	MM GEO-1 through MM GEO-5	MM GEO-1 through MM GEO-5	MM GEO-1 through MM GEO-5
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact GEO-6: Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM GEO-5	MM GEO-5	MM GEO-5	MM GEO-5	MM GEO-5
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact GEO-8: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM GEO-6 through MM GEO-9	MM GEO-6 through MM GEO-9	MM GEO-6 through MM GEO-9	MM GEO-6 through MM GEO-9	MM GEO-6 through MM GEO-9
	Impacts After Mitigation	LTS	LTS	**SU**	**SU**	**SU**	**SU**
Hazards and Hazardous Materials Operational Impacts							
Impact HAZ-4: Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	PS
	Applicable Mitigation	NA	NA	NA	NA	NA	MM HAZ-1 through MM HAZ-4
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Hazards and Hazardous Materials Construction Impacts							
Impact HAZ-2: Would the project create a significant hazard to the public or the	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
		LTS = Less than Significant PS = Potentially Significant			NI = No Impact SU = Significant and Unavoidable		
environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Applicable Mitigation	NA	MM HAZ-1 through MM HAZ-5	MM HAZ-1 through MM HAZ-5	MM HAZ-1 through MM HAZ-5	MM HAZ-1 through MM HAZ-5	MM HAZ-1 through MM HAZ-5
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact HAZ-4: Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Impacts Before Mitigation	LTS	LTS	LTS	LTS	LTS	PS
	Applicable Mitigation	NA	NA	NA	NA	NA	MM HAZ-1 through MM HAZ-4
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Land Use and Planning Operational Impacts							
Impact LUP-2: Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	Impacts Before Mitigation	NI	PS	PS	PS	PS	LTS
	Applicable Mitigation	NA	MM LUP-1	MM LUP-1	MM TRA-7	MM TRA-7	NA
	Impacts After Mitigation	NI	**SU**	**SU**	LTS	LTS	LTS
Land Use and Planning Construction Impacts							
Impact LUP-1: Would the project physically divide an established community?	Impacts Before Mitigation	NI	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM TRA-4	MM TRA-4	MM TRA-4	MM TRA-4	MM TRA-4
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Noise and Vibration Operational Impacts							
Impact NOI-1: Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established by the Federal Transit Administration?	Impacts Before Mitigation	LTS	PS	PS	PS	LTS	PS
	Applicable Mitigation	NA	MM NOI-1.1	MM NOI-3.1	MM NOI-4.1	NA	MM NOI-6.1
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
		LTS = Less than Significant PS = Potentially Significant			NI = No Impact SU = Significant and Unavoidable		
Impact NOI-2: Would the project result in generation of excessive groundborne vibration or groundborne noise levels?	Impacts Before Mitigation	LTS	LTS	LTS	PS	PS	LTS
	Applicable Mitigation	NA	NA	NA	MM VIB-4.1	MM VIB-5.1	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Noise and Vibration Construction Impacts							
Impact NOI-1: Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established by the Federal Transit Administration?	Impacts Before Mitigation	LTS	PS	PS	PS	LTS	PS
	Applicable Mitigation	NA	MM NOI-1.2	MM NOI-3.2	MM NOI-4.2	NA	MM NOI-6.2
	Impacts After Mitigation	LTS	**SU**	**SU**	**SU**	LTS	**SU**
Impact NOI-2: Would the project result in generation of excessive groundborne vibration or groundborne noise levels?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM VIB-1.2	MM VIB-3.1	MM VIB-4.2	MM VIB-5.2	MM VIB-6.1
	Impacts After Mitigation	LTS	**SU**	**SU**	**SU**	**SU**	**SU**
Public Services Construction Impacts							
Impact PUB-3: Would the project result in substantial adverse physical impacts associated with the provision of, or need for, new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools?	Impacts Before Mitigation	LTS	LTS	LTS	PS	PS	LTS
	Applicable Mitigation	NA	NA	NA	MM TRA-4	MM TRA-4	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Transportation Operational Impacts							
Impact TRA-1: Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, and bicycle and pedestrian facilities?	Impacts Before Mitigation	PS	LTS	LTS	PS	PS	LTS
	Applicable Mitigation	NA	NA	NA	MM TRA-7	MM TRA-7	NA
	Impacts After Mitigation	SU	LTS	LTS	LTS	LTS	LTS

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
		LTS = Less than Significant PS = Potentially Significant			NI = No Impact SU = Significant and Unavoidable		
Impact TRA-3: Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersection) or incompatible uses (e.g., farm equipment)?	Impacts Before Mitigation	NI	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM TRA-1 through MM TRA-3	MM TRA-1 through MM TRA-3	MM TRA-1 MM TRA-7	MM TRA-1 MM TRA-7	MM TRA-1 MM TRA-10
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Impact TRA-4: Would the project result in inadequate emergency access?	Impacts Before Mitigation	NI	LTS	LTS	PS	NI	NI
	Applicable Mitigation	NA	NA	NA	MM TRA-9	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	NI	NI
Transportation Construction Impacts							
Impact TRA-1: Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, and bicycle and pedestrian facilities?	Impacts Before Mitigation	LTS	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM TRA-4, MM TRA-5	MM TRA-4, MM TRA-5	MM TRA-4, MM TRA-5, MM TRA-8	MM TRA-4, MM TRA-5, MM TRA-8	MM TRA-4, MM TRA-5
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact TRA-4: Would the project result in inadequate emergency access?	Impacts Before Mitigation	NI	PS	PS	LTS	LTS	LTS
	Applicable Mitigation	NA	MM TRA-4, MM TRA-6	MM TRA-4, MM TRA-6	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
		LTS = Less than Significant PS = Potentially Significant			NI = No Impact SU = Significant and Unavoidable		
Tribal Cultural Resources Construction Impacts							
Impact TCR-1: Would the project cause a substantial adverse change in the significance of a TCR, defined in PRC Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe?	Impacts Before Mitigation	NI	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM CUL-1, MM CUL-6, MM CUL-7, MM CUL-8, MM TCR-1, MM TCR-2	MM CUL-1, MM CUL-6, MM CUL-7, MM CUL-8, MM TCR-1, MM TCR-2	MM CUL-1, MM CUL-6, MM CUL-7, MM CUL-8, MM TCR-1, MM TCR-2	MM CUL-1, MM CUL-6, MM CUL-7, MM CUL-8, MM TCR-1, MM TCR-2	MM CUL-1, MM CUL-6, MM CUL-7, MM CUL-8, MM TCR-1, MM TCR-2
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Wildfire Operational Impacts							
Impact WFR-1: Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?	Impacts Before Mitigation	NI	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM TRA-4	MM TRA-4	MM TRA-4	MM TRA-4	MM TRA-4
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Wildfire Construction Impacts							
Impact WFR-1: Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?	Impacts Before Mitigation	NI	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM TRA-4	MM TRA-4	MM TRA-4	MM TRA-4	MM TRA-4
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS	LTS
Impact WFR-2: Would the project due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?	Impacts Before Mitigation	LTS	PS	PS	PS	LTS	PS
	Applicable Mitigation	NA	MM SAF-1, MM SAF-2	MM SAF-1, MM SAF-2	MM SAF-1, MM SAF-2	NA	MM SAF-1, MM SAF-2
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS	LTS
Impact WFR-3: Would the project require the installation or maintenance of associated	Impacts Before Mitigation	NA	PS	PS	PS	NI	PS

CEQA Impact Topic		No Project	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
		LTS = Less than Significant PS = Potentially Significant			NI = No Impact SU = Significant and Unavoidable		
infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	Applicable Mitigation	NA	MM SAF-1, MM SAF-2	MM SAF-1, MM SAF-2	MM SAF-1, MM SAF-2	NA	MM SAF-1, MM SAF-2
	Impacts After Mitigation	LTS	LTS	LTS	LTS	NI	LTS
Cumulative Operational Impacts							
Impact CUM-1: Would incremental effects of the project be cumulatively considerable for any of the resource topics?	Impacts Before Mitigation	NI	PS	PS	PS	LTS	LTS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	**SU**	**SU**	**SU**	LTS	LTS
Cumulative Construction Impacts							
Impact CUM-1: Would incremental effects of the project be cumulatively considerable for any of the resource topics?	Impacts Before Mitigation	NI	PS	PS	PS	PS	PS
	Applicable Mitigation	NA	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	**SU**	**SU**	**SU**	**SU**	**SU**

Source: HTA, 2024

Alt = Alternative
MM = mitigation measure
NA = not applicable

ES-7.1.2 No Impact and Less Than Significant Impact

Table ES-3 summarizes the environmental resources that would have no impact or a less than significant impact as a result of any of the project alternatives.

Table ES-3. Summary of No Impact or Less Than Significant Impacts for the Project Alternatives

CEQA Impact Topic	CEQA Impact Description	Phase
Agricultural and Forest Resources	Convert prime farmland; conflict with existing zoning for agricultural use, or forest land; loss or conversion of forest land	Operation
		Construction
Aesthetics	AES-1: Scenic vistas AES-2: State scenic highway AES-4: Light and glare	Operation
	AES-4: Light and glare	Construction
Air Quality	AQ-1: Air quality plan AQ-2: Ambient air quality AQ-3: Pollutant concentrations AQ-4: Odors	Operation
	AQ-1: Air quality plan AQ-4: Odors	Construction
Biological Resources	BIO-3: Wetlands BIO-6: Habitat conservation plan	Operation
	BIO-6: Habitat conservation plan	Construction
Cultural Resources	CUL-2: Archaeological resource CUL-3: Human remains	Operation
Energy	ENG-1: Consumption of energy resources ENG-2: Conflict with Local plan	Operation
		Construction
Geology, Soils, Seismicity, and Paleontological Resources	GEO-1: Known earthquake fault GEO-2: Seismic ground shaking GEO-3: Landslides GEO-4: Soil erosion or loss of topsoil GEO-5: Landslide, lateral spreading, subsidence, liquefaction GEO-6: Expansive soils GEO-7: Septic tanks GEO-8: Paleontological resources	Operation
	GEO-1: Known earthquake fault GEO-2: Seismic ground shaking GEO-4: Soil erosion or loss of topsoil GEO-7: Septic tanks	Construction
Greenhouse Gas Emissions	GHG-1: Direct or indirect greenhouse gas emissions GHG-2: Conflict with adopted plan	Operation
		Construction
Hazards and Hazardous Materials	HAZ-1: Transport, use, or disposal of hazardous materials HAZ-2: Release of hazardous materials HAZ-3: Emit hazardous emissions within one-quarter mile of a school HAZ-5: Within two miles of a public airport or public use airport	Operation
	HAZ-1: Transport, use, or disposal of hazardous materials HAZ-3: Emit hazardous emissions within one-quarter mile of a school HAZ-5: Within two miles of a public airport or public use airport	Construction

CEQA Impact Topic	CEQA Impact Description	Phase
Hydrology And Water Quality	HWQ-1: Conflict with water quality standards HWQ-2: Groundwater HWQ-3: Alter drainage HWQ-4: Flood hazard, tsunami, or seiche zones HWQ-5: Conflict with water quality control plan	Operation
		Construction
Land Use and Planning	LUP-1: Divide established community	Operation
	LUP-2: Land use plan	Construction
Mineral Resources	Loss availability of a known mineral resource or a locally important mineral resource recovery site	Operation
		Construction
Noise and Vibration	NOI-3: Within 2 miles of a public airport	Operation
		Construction
Population and Housing	POP-1: Unplanned population growth POP-2: Displace people or housing	Operation
		Construction
Public Service	PUB-1: Fire protection and emergency response PUB-2: Police protection PUB-3: School	Operation
	PUB-1: Fire protection and emergency response PUB-2: Police protection	Construction
Recreation	REC-1: Increase use park REC-2: Recreational facilities expansion	Operation
	REC-2: Recreational facilities expansion	Construction
Transportation	TRA-2: Conflict with CEQA Guidelines Section 15064.3(b)	Operation
	TRA-2: Conflict with CEQA Guidelines Section 15064.3(b) TRA-3: Increase hazards due to geometric design feature	Construction
Tribal Cultural Resources	TCR-1: Tribal cultural resources	Operation
Utilities and Service Systems	US-1: Relocation or construction of new utilities US-2: Water supplies US-3: Wastewater US-4: Solid waste US-5: Solid waste statutes and regulations	Operation
		Construction
Wildfire	WFR-2: Uncontrolled spread of wildfire WFR-3: Exacerbate fire risk due to installation or maintenance of associated infrastructure WFR-4: Exposure of risks from runoff, post-fire slope instability, or drainage changes	Operation
	WFR-4: Expose people or structures to significant risks	Construction

Source: HTA, 2024

ES-7.2 Maintenance Storage Facility

As discussed in Section ES-6, MSF options are proposed for each project alternative: MSF Base Design and MSF Design Option 1 (Alternatives 1 and 3), Electric Bus MSF (Alternative 1), HRT MSF (Alternatives 4 and 5), and HRT MSF (Alternative 6).

ES-7.2.1 Potentially Significant Impacts and Mitigation Measures

Table ES-4 summarizes the environmental resources that would result in potentially significant impacts and applicable mitigation measures for the maintenance and storage facility options.

Table ES-4. Summary of Potentially Significant Impacts Before and After Mitigation for the Maintenance and Storage Facilities

CEQA Impact Topic		MRT MSF Base Design (Alts 1 and 3)	MRT MSF Design Option 1 (Alts 1 and 3)	Electric Bus MSF (Alt 1)	HRT MSF (Alts 4 and 5)	HRT MSF (Alt 6)
		LTS = Less than Significant PS = Potentially Significant		NI = No Impact SU = Significant and Unavoidable		
Biological Resources Operational Impacts						
Impact BIO-1: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	Impacts Before Mitigation	PS	PS	PS	PS	PS
	Applicable Mitigation	MM BIO-1, MM BIO-2	MM BIO-1, MM BIO-2	MM BIO-1, MM BIO-2	MM BIO-1, MM BIO-2	MM BIO-1, MM BIO-2
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact BIO-5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Impacts Before Mitigation	PS	PS	PS	PS	PS
	Applicable Mitigation	MM BIO-3	MM BIO-3	MM BIO-3	MM BIO-3	MM BIO-3
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Biological Resources Construction Impacts						
Impact BIO-1: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	Impacts Before Mitigation	PS	PS	PS	PS	PS
	Applicable Mitigation	MM BIO-4, MM BIO-5	MM BIO-4, MM BIO-5	MM BIO-4, MM BIO-5	MM BIO-4, MM BIO-5	MM BIO-4, MM BIO-5
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact BIO-5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Impacts Before Mitigation	PS	PS	PS	PS	PS
	Applicable Mitigation	MM BIO-11	MM BIO-11	MM BIO-11	MM BIO-12	MM BIO-13
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS

CEQA Impact Topic		MRT MSF Base Design (Alts 1 and 3)	MRT MSF Design Option 1 (Alts 1 and 3)	Electric Bus MSF (Alt 1)	HRT MSF (Alts 4 and 5)	HRT MSF (Alt 6)
		LTS = Less than Significant PS = Potentially Significant		NI = No Impact SU = Significant and Unavoidable		
Cultural Resources Construction Impacts						
Impact CUL-2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	Impacts Before Mitigation	PS	PS	PS	PS	PS
	Applicable Mitigation	MM CUL-1, MM CUL-6, MM CUL-7	MM CUL-1, MM CUL-6, MM CUL-7	MM CUL-1, MM CUL-6, MM CUL-7	MM CUL-1, MM CUL-6, MM CUL-7	MM CUL-1, MM CUL-6, MM CUL-7
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact CUL-3: Would the project disturb any human remains, including those interred outside of formal cemeteries?	Impacts Before Mitigation	PS	PS	PS	PS	PS
	Applicable Mitigation	MM CUL-8	MM CUL-8	MM CUL-8	MM CUL-8	MM CUL-8
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Geology, Soils, Seismicity, and Paleontological Resources Construction Impacts						
Impact GEO-5: Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	Impacts Before Mitigation	PS	PS	PS	PS	PS
	Applicable Mitigation	MM GEO-1 through MM GEO-5	MM GEO-1 through MM GEO-5	MM GEO-1 through MM GEO-5	MM GEO-1 through MM GEO-5	MM GEO-1 through MM GEO-5
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact GEO-6: Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	Impacts Before Mitigation	PS	PS	PS	PS	PS
	Applicable Mitigation	MM GEO-5	MM GEO-5	MM GEO-5	MM GEO-5	MM GEO-5
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
	Impacts Before Mitigation	PS	PS	NI	PS	PS

CEQA Impact Topic		MRT MSF Base Design (Alts 1 and 3)	MRT MSF Design Option 1 (Alts 1 and 3)	Electric Bus MSF (Alt 1)	HRT MSF (Alts 4 and 5)	HRT MSF (Alt 6)
		LTS = Less than Significant PS = Potentially Significant		NI = No Impact SU = Significant and Unavoidable		
Impact GEO-8: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Applicable Mitigation	MM GEO-6 through MM GEO-9	MM GEO-6 through MM GEO-9	NA	MM GEO-6 through MM GEO-9	MM GEO-6 through MM GEO-9
	Impacts After Mitigation	LTS	LTS	NI	LTS	LTS
Hazards and Hazardous Materials Construction Impacts						
Impact HAZ-2: Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Impacts Before Mitigation	PS	PS	PS	PS	PS
	Applicable Mitigation	MM HAZ-1 through MM HAZ-4	MM HAZ-1 through MM HAZ-4	MM HAZ-1 through MM HAZ-4	MM HAZ-1 through MM HAZ-4	MM HAZ-1 through MM HAZ-4
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Land Use and Planning Operational Impacts						
Impact LUP-2: Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	Impacts Before Mitigation	**SU**	NI	NI	**SU**	**SU**
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	**SU**	NI	NI	**SU**	**SU**
Land Use and Planning Construction Impacts						
Impact LUP-1: Would the project physically divide an established community?	Impacts Before Mitigation	PS	PS	PS	PS	PS
	Applicable Mitigation	MM TRA-4	MM TRA-4	MM TRA-4	MM TRA-4	MM TRA-4
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Noise and Vibration Construction Impacts						
Impact NOI-1: Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in	Impacts Before Mitigation	PS	PS	PS	PS	PS
	Applicable Mitigation	MM NO-1.2, MM NOI-3.2	MM NO-1.2, MM NOI-3.2	MM NOI-1.2	MM NOI-4.2, MM NOI-5.1	MM NOI-6.2

CEQA Impact Topic		MRT MSF Base Design (Alts 1 and 3)	MRT MSF Design Option 1 (Alts 1 and 3)	Electric Bus MSF (Alt 1)	HRT MSF (Alts 4 and 5)	HRT MSF (Alt 6)
		LTS = Less than Significant PS = Potentially Significant		NI = No Impact SU = Significant and Unavoidable		
excess of standards established by the Federal Transit Administration?	Impacts After Mitigation	**SU**	**SU**	**SU**	**SU**	**SU**
Impact NOI-2: Would the project result in generation of excessive groundborne vibration or groundborne noise levels?	Impacts Before Mitigation	LTS	PS	LTS	PS	PS
	Applicable Mitigation	NA	MM VIB-1.1, MM VIB-3.1	NA	MM VIB-4.2, MM VIB-5.2	MM VIB-6.3
	Impacts After Mitigation	LTS	**SU**	LTS	**SU**	**SU**
Tribal Cultural Resources Construction Impacts						
Impact TCR-1: Would the project cause a substantial adverse change in the significance of a TCR, defined in PRC Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe?	Impacts Before Mitigation	PS	PS	PS	PS	PS
	Applicable Mitigation	MM TCR-1, MM TCR-2	MM TCR-1	MM TCR-1	MM TCR-1	MM TCR-1
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Utilities and Service Systems Operational Impacts						
Impact US-1: Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Impacts Before Mitigation	PS	LTS	LTS	PS	PS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	**SU**	LTS	LTS	**SU**	**SU**
Wildfire Construction Impacts						
Impact WFR-1: Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?	Impacts Before Mitigation	PS	PS	PS	PS	PS
	Applicable Mitigation	MM TRA-4	MM TRA-4	MM TRA-4	MM TRA-4	MM TRA-4
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS

CEQA Impact Topic		MRT MSF Base Design (Alts 1 and 3)	MRT MSF Design Option 1 (Alts 1 and 3)	Electric Bus MSF (Alt 1)	HRT MSF (Alts 4 and 5)	HRT MSF (Alt 6)
		LTS = Less than Significant PS = Potentially Significant		NI = No Impact SU = Significant and Unavoidable		
Cumulative Operational Impacts						
Impact CUM-1: Would incremental effects of the project be cumulatively considerable for any of the resource topics?	Impacts Before Mitigation	PS	LTS	LTS	PS	PS
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	**SU**	LTS	LTS	**SU**	**SU**

Source: HTA, 2024

Note: Air Quality impacts are not included in this table because the Air Quality analysis of each alternative included impacts related to the MSF.
Alt = Alternative
MM = mitigation measure
NA = not applicable
PRC = Public Resources Code

ES-7.3 Mitigation Measures

Table ES-5 provides a brief description of each mitigation measure.

Table ES-5. Summary of Mitigation Measures

Mitigation Measure	Description
Aesthetics	
MM AES-1	Temporary privacy screens during construction
Air Quality	
MM AQ-1	Zero-emission hauling trucks
MM AQ-2	Implementation of Metro's Green Construction Policy
MM AQ-3	Implementation of fugitive dust control measures
Biological Resources	
MM BIO-1	Avoid and minimize operations-related impacts to nesting birds
MM BIO-2	Avoid and minimize operations-related impacts to special-status bat species
MM BIO-3	Avoid and minimize operations-related impacts to protected trees and shrubs
MM BIO-4	Avoid and minimize construction-related impacts to nesting birds
MM BIO-5	Avoid and minimize construction-related impacts to special-status bat species
MM BIO-6	Avoid and minimize construction-related impacts to crotch's bumble bee
MM BIO-7	Avoid and minimize project-related impacts to least bell's vireo
MM BIO-8	Avoid and minimize construction-related impacts to special-status reptiles
MM BIO-9	Avoid and minimize construction-related impacts to special-status plants
MM BIO-10	Avoid and minimize construction-related impacts to sensitive vegetation communities
MM BIO-11	Avoid and Minimize Construction-Related Impacts to Protected Trees and Shrubs (Alternatives 1 and 3)
MM BIO-12	Avoid and minimize construction-related impacts to protected trees and shrubs (Alternatives 4 and 5)
MM BIO-13	Avoid and minimize construction-related impacts to protected trees and shrubs (Alternative 6)
MM BIO-14	Avoid and minimize construction-related impacts to mountain lion and vertebrate movement corridors
MM BIO-15	Avoid and minimize construction-related impacts to jurisdictional aquatic resources
MM BIO-16	Installation of Environmentally Sensitive Area fencing or flagging
MM BIO-17	Monitoring of project activities within or near sensitive habitat or jurisdictional aquatic resources
MM BIO-18	Implementation of a Worker Environmental Awareness Plan (WEAP)
MM BIO-19	Wildfire prevention measures
MM BIO-20	Prohibition of construction workers bringing pets and firearms
MM BIO-21	Minimizing erosion, runoff, and sedimentation during rain events
MM BIO-22	Minimizing construction light pollution
MM BIO-23	Vehicle washing to prevent invasive species
MM BIO-24	Dust suppression measures
MM BIO-25	Limiting vehicle speeds on dirt or gavel access roads
MM BIO-26	Minimizing open trenches to prevent wildlife entrapment
MM BIO-27	Removal of spoils, trash, and any construction-generated debris
MM BIO-28	Avoid and minimize operations-related impacts to mountain lion and vertebrate Movement Corridors
MM BIO-29	Avoid and minimized construction-related impacts to overwintering burrowing owls

Mitigation Measure	Description
Cultural Resources	
MM CUL-1	Cultural resources monitoring and mitigation plan
MM CUL-2	Design treatments
MM CUL-3	Pre-construction and construction protection measures
MM CUL-4	Historical resource archival documentation
MM CUL-5	Interpretive program
MM CUL-6	Cultural resource training
MM CUL-7	Archaeological monitoring
MM CUL-8	Plan for unanticipated discovery of human remains
Geology	
MM GEO-1	Use of ground motion early warning systems
MM GEO-2	Use of shore excavation walls
MM GEO-3	Compliance with final geotechnical report
MM GEO-4	Prevent corrosion from soils
MM GEO-5	Preparation of a construction management plan
MM GEO-6	Paleontological monitoring during earth-moving activities
MM GEO-7	Preparation of a Paleontological Resources Impact Mitigation Program
MM GEO-8	Workers Environmental Awareness Program training
MM GEO-9	Paleontological monitoring for unrecognized paleontological resources
Hazards and Hazardous Materials	
MM HAZ-1	Phase II Environmental Site Assessment
MM HAZ-2	Soil and Groundwater Management Plan
MM HAZ-3	Contractor Specifications
MM HAZ-4	Worker Health and Safety Plan
MM HAZ-5	Hazardous Building Survey and Abatement
Land Use and Planning	
MM LUP-1	Coordination to amend open space and community plans
Noise and Vibration	
MM NOI-1.1	Alternative 1 Soundwalls
MM NOI-1.2	Alternative 1 Noise Control Plan
MM VIB-1.1	Alternative 1 Vibration Control Plan
MM NOI-3.1	Alternative 3 Soundwalls
MM NOI-3.2	Alternative 3 Noise Control Plan
MM VIB-3.1	Alternative 3 Vibration Control Plan
MM NOI-4.1	Alternative 4 Soundwalls
MM NOI-4.2	Alternative 4 Noise Control Plan
MM VIB-4.1	Alternative 4 Trackwork Isolation Methods
MM VIB-4.2	Alternative 4 Vibration Control Plan
MM NOI-5.1	Alternative 5 Noise Control Plan
MM VIB-5.1	Alternative 5 Trackwork Isolation Methods
MM VIB-5.2	Alternative 5 Vibration Control Plan
MM NOI-6.1	Alternative 6 TPSS Noise Reduction
MM NOI-6.2	Alternative 6 Noise Control Plan
MM VIB-6.1	Alternative 6 Vibration Control Plan
Wildfire	
MM SAF-1	Curtail above ground construction during high-risk wildfire periods
MM SAF-2	Clearing dry vegetation from construction and development sites

Mitigation Measure	Description
Tribal Cultural Resources	
MM TCR-1	Native American Monitoring
MM TCR-2	Unanticipated Discovery of Human Remains
Transportation	
MM TRA-1	Fare gate replacement at Van Nuys Metrolink ESFV LRT Station
MM TRA-2	Right-in/right-out access only at Expo/Sepulveda driveway
MM TRA-3	Advance warning signage at Sherman Way pick-up/drop-off location
MM TRA-4	Transportation Management Plan
MM TRA-5	Temporary bus service to replace disrupted Metro rail service
MM TRA-6	UCLA and VA Medical Center Emergency Access Coordination
MM TRA-7	Replace Willis Avenue pedestrian overhead
MM TRA-8	Limit truck movements near Ivy Bound Sherman Oaks Charter School
MM TRA-9	First responder and emergency services coordination for raised median design
MM TRA-10	Redesign west entrance of Expo/Bundy Station

Source: HTA, 2024

ES-7.4 Significant and Unavoidable Impacts

Section 15126.2(c) of the CEQA Guidelines requires EIRs to include a discussion of any significant environmental impacts that cannot be avoided if a project is implemented. This DEIR identifies environmental resources with significant impacts and provides mitigation measures to lessen the impact to a less than significant level where possible, as discussed previously. If a significant impact cannot be mitigated to a less than significant level, it is considered a significant and unavoidable impact.

Table ES-6 summarizes the significant and unavoidable impacts that would result from each of the project alternatives, after implementation of mitigation measures.

Table ES-6. Significant and Unavoidable Impacts After Mitigation

		Alt 1 + Base Design MSF	Alt 1 + MSF Design Option 1	Alt 3 + Base Design MSF	Alt 3 + MSF Design Option 1	Alt 4 + MSF	Alt 5 + MSF	Alt 6 + MSF
Aesthetics	Construction							
	Operation					X		
Air Quality	Construction	X	X	X	X	X	X	X
	Operation							
Cultural Resources	Construction	X	X	X	X	X		X
	Operation							
Geology, Soils, Seismicity, and Paleontological Resources	Construction			X	X	X	X	X
	Operation							
Land Use and Planning	Construction							
	Operation	X	X	X	X	X	X	X
Noise and Vibration	Construction	X	X	X	X	X	X	X
	Operation							
Utilities and Service Systems	Construction							
	Operation	X		X		X	X	X
Total		**5**	**4**	**6**	**5**	**7**	**5**	**6**

Source: HTA, 2024

Aesthetics and Visual Quality

- **Impact AES-3:** Operation of Alternative 4 would represent a change in views and visual quality and character as compared to the existing conditions. The addition of the Alternative 4 aerial alignment and associated infrastructure would affect the visual character of the Sepulveda Boulevard corridor through Sherman Oaks and Van Nuys by introducing new visible vertical features. No feasible mitigation measures to reduce this impact. **(Alternative 4)**

Air Quality

- **Impact AQ-2:** Construction emissions would exceed the South Coast Air Quality Management District's (SCAQMD) regional significance thresholds for nitrogen oxides (NO_X) and carbon monoxide (CO) emissions. No feasible mitigation measures to reduce this impact. **(Alternatives 1, 3, 4, 5, 6)**
- **Impact AQ-3:** Localized construction emissions would exceed the respirable particulate matter of diameter less of than 10 microns (PM_{10}) localized significance threshold (LST) for construction activity in the San Fernando Valley (Valley). No feasible mitigation measures to reduce this impact. (**Alternatives 1 and 3)**
- **Impact AQ-3:** Localized construction emissions would exceed the PM_{10} and fine particulate matter of diameter less than 2.5 microns ($PM_{2.5}$) LSTs for construction activity in the Valley and exceed the PM_{10} LST in the Westside. No feasible mitigation measures to reduce this impact. **(Alternatives 4 and 5)**
- **Impact AQ-3:** Localized construction emissions would exceed the PM_{10} LST for construction activity in the Valley and Westside. No feasible mitigation measures to reduce this impact. (**Alternative 6)**

Cultural Resources

- **Impact CUL-1:** The Dai Siani Ristorante (Sherwood Coiffeurs) property would be acquired and demolished for the construction of a proposed aerial structure parallel to I-405. Physical demolition of the property would materially impair the significance of the historical resource. (**Alternatives 1 and 3)**
- **Impact CUL-1:** The Ventura Boulevard/Sepulveda Boulevard Station would require a partial take of the Rodeo Realty parking garage, which is a character-defining feature of the Rodeo Realty building. Physical demolition would materially impair the significance of the historical resource. **(Alternative 4)**
- **Impact CUL-1:** Bill's Valley Car Wash property would be acquired and demolished for the construction of the proposed Van Nuys Metrolink Station. The Bill's Valley Car Wash building at 7530 Van Nuys Boulevard is a commercial property that is significant for its role in the commercial and industrial development of Van Nuys and for its 1962 Googie design. Physical demolition would materially impair the significance of the historical resource. **(Alternative 6)**

Geological Resources

- **Impact GEO-8:** Operation of the tunnel boring machine (TBM) would not allow a paleontological monitor to view the sediments as they are being excavated or the walls of the tunnel following removal of excess sediments and prior to the installation of the tunnel's concrete walls. For these reasons, monitoring paleontological resources adjacent to the TBM is not possible. (**Alternatives 3, 4, 5, and 6)**

Land Use and Planning

- **Impact LUP-2:** Conflict with the *Brentwood-Pacific Palisades* Community Plan, *Van Nuys-North Sherman Oaks Community Plan,* and the *Santa Monica Mountains Conservancy Comprehensive Plan* (DCP, 1998a, 1998b; Santa Monica Mountains Comprehensive Commission, 1979, respectively). The property acquisitions located within the Santa Monica Mountains in addition to the Teichman Family Magnolia Park in Sherman Oaks for the proposed alignment, stations, and TPSS sites would not be consistent with applicable land use plans, policies, or regulations. **(Alternatives 1 and 3)**

  Operation of the proposed MSF option would conflict with LADWP's *Urban Water Management Plan* (LADWP, 2020), which has identified this site for the Mid-Valley Water Facility project. Metro has been in coordination with LADWP and continued coordination is required to identify a solution to the conflict and determine if a new or relocated facility is required. Therefore, since the conflict with the proposed LADWP facility is unresolved and no solution has been identified, operation of the proposed MSF option would result in a significant and unavoidable impact related to conflicting with local land use plans. **(MSF Base Design – Alternatives 1 and 3, HRT MSF – Alternatives 4 and 5, HRT MSF – Alternative 6)**

Noise

- **Impact NOI-1:** Temporary and periodic increases in ambient noise levels due to construction activity that would exceed the Federal Transit Administration (FTA) criteria, and where applicable, the standards established by the local noise ordinances. While MM NOI-1.2 would be implemented and include noise-reducing measures, there may still be temporary or periodic increases in ambient noise levels that exceed FTA construction impact criteria. No additional feasible mitigation measures to reduce this impact. **(Alternatives 1 and 3)**

- **Impact NOI-1:** Temporary and periodic increases in ambient noise levels due to construction activity that would exceed FTA criteria, and where applicable, the standards established by the local noise ordinances. While MM NOI-4.2 would be implemented and include noise-reducing measures, there may still be temporary or periodic increases in ambient noise levels that exceed FTA construction impact criteria. No additional feasible mitigation measures to reduce this impact. **(Alternative 4)**
- **Impact NOI-1:** While MM NOI-5.1 would be implemented and include noise-reducing measures, there may still be temporary or periodic increases in ambient noise levels that exceed FTA construction impact criteria. No additional feasible mitigation measures to reduce this impact. **(Alternative 5)**
- **Impact NOI-1:** Temporary and periodic increases in ambient noise levels due to construction activity that would exceed FTA's criteria, and where applicable, the standards established by the local noise ordinances. While MM NOI-6.2 would be implemented and include noise-reducing measures, there may still be temporary or periodic increases in ambient noise levels that exceed FTA construction impact criteria. No additional feasible mitigation measures to reduce this impact. **(Alternative 6)**
- **Impact NOI-2:** Construction activities, such as pile driving, use of drill rigs, pavement breaking, and the use of tracked vehicles (e.g., bulldozers) and hoe rams. While MM VIB-1.1 would be implemented and include vibration-reducing measures, there may still be temporary or periodic increases in vibration levels that exceed FTA construction vibration impact criteria. No additional feasible mitigation measures to reduce this impact. **(Alternative 1)**
- **Impact NOI-2:** The TBM would be the main source of groundborne vibration (GBV) Along the underground alignment. However, the TBM is slow moving and causes very little vibration and related groundborne noise (GBN) to the surrounding area when operating at full tunnel depths. While MM VIB-3.1 would be implemented and include vibration-reducing measures, there may still be temporary or periodic increases in vibration levels that exceed FTA construction vibration impact criteria. No additional feasible mitigation measures to reduce this impact. (**Alternative 3)**
- **Impact NOI-2:** The TBM would be the main source of GBVs along the underground alignment. However, the TBM is slow moving and causes very little vibration and related GBN to the surrounding area when operating at full tunnel depths. While MM VIB-4.1 would be implemented and include vibration-reducing measures, there may still be temporary or periodic increases in vibration levels that exceed FTA construction vibration impact criteria. No additional feasible mitigation measures to reduce this impact. **(Alternative 4)**
- **Impact NOI-2:** Similar to Alternative 4, while MM VIB-5.1 would be implemented and include vibration-reducing measures, there may still be temporary or periodic increases in vibration levels that exceed FTA construction vibration impact criteria. No additional feasible mitigation measures to reduce this impact. (**Alternative 5)**
- **Impact NOI-2:** The TBM would be the main source of GBVs along the underground alignment. However, the TBM is slow moving and causes very little vibration and related GBN to the surrounding area when operating at full tunnel depths. While MM VIB-6.1 would be implemented and include vibration-reducing measures, there may still be temporary or periodic increases in vibration levels that exceed FTA construction vibration impact criteria. There are no additional feasible mitigation measures to reduce construction vibration levels. **(Alternative 6)**

Utilities and Service Systems

- **Impact US-1:** The MSF Base Design would conflict with LADWP's Mid-Valley Water Facility project, which is proposed on the MSF Base Design site. The Mid-Valley Water Facility project would replace outdated buildings and trailers currently situated at various locations throughout the San Fernando Valley. Due to the conflict with the proposed facility, the MSF Base Design may result in the need to relocate or construct a new facility which may have significant environmental effects. Metro has been in coordination with LADWP and continued coordination is required to identify a solution to the conflict and determine if a new or relocated facility is required. Therefore, since the conflict with the proposed LADWP facility is unresolved and no solution has been identified, the MSF Base Design would result in a significant and unavoidable impact related to the need to relocate or construct new water facilities. **(MSF Base Design – Alternatives 1 and 3)**

  Part of the proposed MSF would be located on a portion of LADWP property, which is currently planned for Mid-Valley Water Facility project. Due to the conflict with the proposed facility, the MSF may result in the need to relocate or construct a new facility which may have significant environmental effects. Metro has been in coordination with LADWP and continued coordination is required to identify a solution to the conflict and determine if a new or relocated facility is required. Therefore, since the conflict with the proposed LADWP facility is unresolved and no solution has been identified, the MSF would result in a significant and unavoidable impact related to the need to relocate or construct new water facilities. **(HRT MSF – Alternatives 4 and 5, HRT MSF – Alternative 6)**

ES-7.5 Environmentally Superior Alternative

CEQA section 15126.6(e)(2) requires that an Environmental Impact Report (EIR) identify an "environmentally superior alternative" among the alternatives to the Proposed Project. The environmentally superior alternative is the alternative that would be expected to generate the fewest adverse environmental impacts. The range of project alternatives and their impacts are discussed in Section ES-7 and compared in Table ES-2.

The No Project Alternative would generate the fewest adverse impacts, making it technically the environmentally superior alternative. CEQA Guidelines Section 15126.6(e)(2) requires that when the No Project Alternative is identified as the environmentally superior alternative, the EIR must also identify another alternative to the Proposed Project as the environmentally superior alternative. The No Project Alternative would fail to meet many regional and local planning objectives.

Unlike the No Project Alternative, all of the project alternatives would meet the project objectives. As Alternative 1 with MSF Design Option 1 would result in the fewest significant and unavoidable impacts, it is the environmentally superior alternative to the Proposed Project. The Metro Board has the discretion to identify an alternative other than the environmentally superior alternative as the LPA. In making its decision, the Board may take into account the DEIR, public comments received during the comment period, technical analyses, stakeholder input, and other policy considerations, such as project objectives, cost, and ridership. Identification of the LPA does not determine the final Project; the final decision on the Project will be made after completion of the FEIR.

ES-8 Public Outreach

The Project's outreach program engages with stakeholders to establish communication and adapt to the needs and participation preferences of communities. This strategy provides an approach to

collaborating with local organizations for effective outreach methods, engagement, and tools for meaningful community input. The outreach program focused on disseminating information about the Project, garnering public input, and supporting the required technical and legal environmental processes.

A variety of notification and informational tools were used for outreach to target audiences. Outreach methods included meetings with public agencies, elected officials, and community stakeholders; direct mail notification; newspaper display advertisements (print and digital); project awareness banners at highly visible locations along the Sepulveda Transit Corridor; and pop-up or information tables. Public involvement opportunities included public community meetings, display of project materials at other Metro project community meetings, information booths, and pop-up tables at various community events. Project communication tool included a project website, a project helpline, a project overview survey, e-mail notifications, social media (i.e., Facebook and X), project videos (video simulation, project overview, meeting webcasts, and recordings), electronic signs, text messages, *The Source* (Metro's online publication), and earned media (free media including *Sherman Oaks Neighborhood Council*, Railway Track & Structures (RT&S), *The Daily Bruin*, and *Railway Gazette*).

Following the release of this DEIR a 90-day public comment period will be held to promote review of the DEIR and gather public comments. Metro will also host public hearings throughout the project area to present findings of the DEIR and solicit public comments on the document.

ES-8.1 Outreach Events

Outreach events included webinars, community update meetings, scoping meetings, community open house meetings, and pop-up events. Table ES-7 summarizes the public outreach efforts for the Project. Refer to Chapter 5, Public Participation and Outreach, of this DEIR for detailed information on public and stakeholder outreach efforts for the Project.

Table ES-7. Public Outreach Meetings for the Project

Meeting Information	Outreach Prior to Scoping	Public Scoping Process	Post-Scoping Public Outreach Meeting	Outreach During Preparation of the DEIR	Fall 2023 Community Meetings	Fall 2024 Community Meetings	Spring 2025 Community Meetings	Other
Type of Meeting	Webinar; Community Update Meetings	Scoping Meetings	Community Update Meeting	Community Open House Meetings	Community Update Meetings	Community Update Meetings	Community Update Meetings	Pop-Up Meetings
No. of Meetings	2	4	1	3	3	3	5	25

Source: HTA, 2025

ES-9 Areas of Controversy and Issues to be Resolved

CEQA Guidelines Section 15123(b)(2) requires that an EIR identify areas of controversy known to the lead agency, including issues raised by other agencies and the public. Areas of potential controversy for the Project include the following:

- Effects to local businesses and neighborhoods during construction
- Seismic safety concerns

- Traffic changes due to lane and road closures during construction
- Habitat and wildlife connectivity in the Santa Monica Mountains
- Security and safety issues at stations

Issues to be resolved include:

- Project funding and timeline
- Use of federal property including the West Los Angeles VA Medical Center
- Coordination with LADWP, the California Department of Transportation, Santa Monica Mountains Conservancy, and U.S. Army Corps of Engineers. Inclusion of an alternative in the DEIR does not mean that these or other agencies have approved the design. Project elements that interface with other agencies, such as LADWP, have not been approved by these agencies, and inclusion of them in the DEIR does not indicate approval of the alternative or the design.

CEQA Guidelines Section 15123(b)(3) requires a discussion of issues to be resolved, including Metro Board identification and approval of the LPA, and how Metro will mitigate significant impacts. Upon completion of project CEQA review, the Metro Board will consider approval of the Mitigation Monitoring and Reporting Plan (MMRP). The MMRP will address mitigation measures that will apply to the preferred alignment or LPA (as identified by the Metro Board), and these mitigation measures would be required to reduce identified significant impacts to a less than significant level.

ES-10 Next Steps

Upon completion of the DEIR public review period and review of public and agency comments, the Metro Board will consider identification of a preferred alignment or LPA. Public and agency comments received on this DEIR will be considered for the identification of the LPA. The identification of the LPA will move the project development process forward, including preparation of the FEIR and anticipated initiation of the federal environmental process.