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Agenda Number: 10.

REVISED
PLANNING AND PROGRAMMING COMMITTEE
JANUARY 14, 2026

SUBJECT: SEPULVEDA TRANSIT CORRIDOR PROJECT

ACTION: APPROVE RECOMMENDATION

RECOMMENDATION

CONSIDER:

- A. APPROVING the Locally Preferred Alternative (LPA) as Modified Alternative 5: Heavy rail transit underground between the Van Nuys Metrolink Station and the E Line Expo/Sepulveda Station modified to provide a connection to the Metro G Line and East San Fernando Valley (ESFV) Light Rail Line at Van Nuys Boulevard;
- B. AUTHORIZING further design refinement and advancement of the LPA to address project cost, risk, and comments received on the Draft Environmental Impact Report (EIR), including but not limited to defining an Initial Operating Segment (IOS) and a phasing plan with priority given to connecting the San Fernando Valley-at the Metro G Line and ESFV Light Rail Line at Van Nuys Boulevard-and the Westside-at the Metro D Line-including refined maintenance and storage strategy; and
- C. AUTHORIZING advancement of the Final EIR and any additional environmental documentation required as a result of selecting the LPA and development of an IOS.

YAROSLAVSKY, BASS, PADILLA, NAJARIAN, AND MITCHELL AMENDMENT:

To direct the Chief Executive Office to:

- A. Report back within 90 days on a community engagement plan with the communities who will be directly impacted by the Modified Alternative 5 alignment, especially within the Initial Operating Segment.
- B. Work with the relevant City of Los Angeles council offices and the Directors who represent the areas directly impacted by the Modified Alternative 5 to identify resident community groups and other stakeholders within the proposed alignment.

- C. Provide outreach materials as they become available explaining Modified Alternative 5, including maps, anticipated construction impacts, and potential property or access impacts.
- D. Maintain a publicly accessible outreach calendar that provides at least two weeks advance notice on any outreach workshops.

BASS AMENDMENT: Report back within 120 days on transportation alternatives to address first and last-mile connections to the Getty Center that align with and enhance Metro's commitments to accessing cultural destinations.

ISSUE

The Sepulveda Transit Corridor Project (the Project) adds 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 Interstate 405 (I-405) freeway. Metro is the CEQA lead agency that is responsible for preparing the EIR for the Project. The Draft EIR was released on June 2, 2025. To focus efforts moving forward on the most feasible alternative that best meets the Project's goals and objectives, the Metro Board of Directors may now select a single alignment (or Locally Preferred Alternative) for further analysis in the Final EIR and any additional environmental documentation required to environmentally clear the LPA.

BACKGROUND

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. The natural barrier created by the Santa Monica Mountains makes traveling between the San Fernando Valley and the Westside difficult and slow. The I-405 is one of the most congested corridors in the country-ranked #17 nationally and #4 in California-and transit service between the San Fernando Valley and the Westside is limited. The Project would add a critical regional connection to the transportation network, linking the San Fernando Valley with the Westside and providing a fast, safe and reliable alternative to the congested I-405 freeway.

In 2016, Los Angeles County voters approved Measure M, which included transit improvements between the San Fernando Valley, the Westside, and Los Angeles International Airport (LAX). Measure M identifies the implementation of the Sepulveda Transit Corridor Project in two phases: 1) Segment between the San Fernando Valley and the Westside; and 2) Extension to LAX.

Between 2017 and 2019, Metro conducted the Sepulveda Transit Corridor Feasibility Study, which identified three feasible heavy rail alternatives and one feasible monorail alternative between the San Fernando Valley and the Westside. The Board received the findings of the study in 2019.

In July 2019, the Board approved a finding that using a pre-development agreement (PDA) approach pursuant to Public Utilities Code Section 130242 will achieve certain private sector efficiencies in the integration of the planning, design, and construction of the Project. A PDA is a form of early

contractor involvement where a private project developer participates in early project definition and design in partnership with the project owner. This is the first time Metro has utilized a PDA. Subsequently, in March 2021, the Board approved the award of PDAs with two contractor teams for the further definition and design development of the contractors' transit alternatives. In August 2021, a Notice to Proceed was issued to these teams, which resulted in five PDA alternatives being carried forward for environmental study. In addition, elements from the Feasibility Study that were not proposed by either PDA team were incorporated into a sixth alternative for environmental review by Metro's environmental consultant. The six alternatives include both monorail and heavy rail trains and range between approximately 13 and 16 miles in length. From north to south, these routes all connect to the Van Nuys Metrolink Station, future ESFV Light Rail Line, Metro G Line (Orange), future Metro D Line (Purple), and Metro E Line (Expo).

The Project began the CEQA environmental clearance process on November 30, 2021, and the scoping period extended for 74 days through February 11, 2022. In July 2024, one of the alternatives (Alternative 2) was removed from further consideration at the request of one of the PDA teams. The Draft EIR, which evaluated the five remaining alternatives, was released on June 2, 2025 for a 90-day public review and comment period through August 30, 2025.

The Measure M Expenditure Plan identifies \$5.7 billion (2015\$) in funding for the Project, and additional funds will be needed to construct any of the build alternatives to connect the San Fernando Valley and the Westside. Metro is considering utilizing a public-private partnership, or P3, for delivery of the Project. The two PDA teams are actively pursuing the opportunity to design, construct, operate, maintain and finance the Project through a P3 delivery method.

DISCUSSION

The Sepulveda Transit Corridor 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 Century City, Westwood, and UCLA. Each day 86,000 students, faculty, staff, and visitors travel to the UCLA campus, and more than 50,000 people work in Century City;
- **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 ESFV Light Rail Line, and the Metro D, E, and G Lines; and
- **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 due to construction.

Traffic congestion in the Project Study Area is likely to continue to deteriorate, with the number of trips forecast to grow approximately 17 percent by 2042 and 24 percent by 2057. 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 by transit;

- **Attract 20,000 to 42,000 new daily transit riders** by serving an area underserved by existing transit infrastructure;
- Provide mobility options that would 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**; and
- Result in people who would otherwise drive using transit, leading to **improved safety and reliability on roads and highways, improved emergency access in canyons, and opportunities for congestion reduction** through the I-405 corridor, including saving on average over 10 million to over 25 million person hours a year for roadway users.

Alternatives Evaluated in the Draft EIR

The Draft EIR evaluates five rail transit alternatives that connect the San Fernando Valley with the Westside. For all alternatives, the northern end of the Project would be at the Van Nuys Metrolink/Amtrak station, and the southern end point at the Metro E Line. As required by CEQA, a “No Project” alternative is also being considered. Descriptions of these project alternatives, including maps, are in the Draft EIR Executive Summary (Attachment A). The following is a high-level description of each alternative.

Alternative 1: Monorail with aerial alignment in the I-405 corridor (15.1 miles, eight aerial stations), electric bus connection to UCLA. Monorail maintenance and storage facility (MSF) options: 1) East of I-405 south of Metrolink Ventura County Line tracks; 2) East of Van Nuys Metrolink Station. Electric bus MSF at the northwest corner of Pico Boulevard and Cotner Avenue.

Alternative 3: Monorail with aerial alignment in the I-405 corridor and underground alignment between the Getty Center and Wilshire Boulevard (16.1 miles, seven aerial stations, two underground stations). MSF options: 1) East of I-405 south of Metrolink Ventura County Line tracks; 2) East of Van Nuys Metrolink Station.

Alternative 4: Heavy rail with underground alignment south of Ventura Boulevard and aerial alignment generally along Sepulveda Boulevard in the San Fernando Valley (13.9 miles, four aerial stations, four underground stations). MSF west of Woodman Avenue, south of the Metrolink Ventura County Line railroad tracks.

Alternative 5: Heavy rail with underground alignment including below Sepulveda Boulevard in the San Fernando Valley (13.8 miles, one aerial station, seven underground stations). MSF west of Woodman Avenue, south of the Metrolink Ventura County Line railroad tracks.

Alternative 6: Heavy rail with underground alignment along Van Nuys Boulevard in the San Fernando Valley and a southern terminus station at Bundy Drive (12.9 miles, seven underground stations). MSF west of Woodman Avenue, south of the Metrolink Ventura County Line railroad tracks.

NOTE: Alternative 2 was removed from further consideration during the environmental process in July 2024.

Table 1 includes a summary of project components for each alternative.

Table 1: Summary of Build Alternative Project Components

	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
Train Technology	Automated Monorail	Automated Monorail	Automated Heavy Rail	Automated Heavy Rail	Driver-Operated Heavy Rail
Alignment	Aerial	Aerial/Underground	Aerial (n. of Valley Vista)/Underground	Aerial (n. of Raymer)/Underground	Underground
Length (miles)	15.1	16.1	13.9	13.8	12.9
Stations	8	9	8	8	7
End-to-end travel time (minutes)	~28	~33	~20	~20	~18
Peak train frequency (minutes)	2.77	2.77	2.5	2.5	4
Connection to UCLA	Electric Bus	Station under campus	Station under campus	Station under campus	Station under campus

Comparison of Alternatives Studied in Draft EIR

The Draft EIR evaluates five transit alternatives at equal levels of detail. Table 2 provides a comparison of some key metrics between these alternatives.

Table 2: Comparison of Draft EIR Alternatives

	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
End-to-end travel time (minutes)	~28	~33	~20	~20	~18
Peak train frequency (minutes)	2.77	2.77	2.5	2.5	4
Daily Ridership (2045)	~63,000	~82,000	~123,000	~124,000	~107,000
Daily New Riders (2045)	~20,000	~26,000	~42,000	~42,000	~37,000
Daily VMT Reduction (2045)	~342,000	~451,000	~768,000	~775,000	~695,000
Residential Acquisitions	1	1	212	34	127
Capital Cost (2023\$)	\$15.4B	\$20.8B	\$20.0B	\$24.2B	\$24.4B
Annual Operating and Maintenance Cost (2023\$)	\$131M	\$130M	\$147M	\$148M	\$157M
FTA Cost Effectiveness¹	\$36.48	\$32.60	\$21.85	\$24.39	\$27.35

¹ Federal Transit Administration (FTA) Cost Effectiveness is the annualized cost per annual linked project trip. A lower number is a more cost-effective alternative.

The following section describes the key opportunities and challenges for each alternative studied in the Draft EIR.

No Project considers existing conditions and what would be reasonably expected to occur in the foreseeable future if the Project does not occur. Metro's Line 761 would still traverse the Sepulveda Pass and continue to be caught in the same congestion that others face. Performance against the No Project Alternative is how all the other alternatives are evaluated. For example, all Project Alternatives reduce VMT over the No Project Alternative, ranging from 341,800 (Alternative 1) at the low end to 775,100 (Alternative 5) at the high end each day. All Project Alternatives add new daily transit trips to the transit network that would otherwise not be taken under the No Project Alternative, ranging from 20,501 (Alternative 1) to 42,043 (Alternative 5) daily. With the No Project Alternative, there would not be a fast, reliable alternative to existing routes through the Sepulveda Pass.

Alternative 1 has the lowest capital cost among the project alternatives (\$15.4 billion) which is about 37% less than the highest cost alternative. It also has the lowest ridership at approximately 51% of the highest ridership alternative. In the Draft EIR, Alternative 1 was identified as the Environmentally Superior Alternative as it has the fewest significant and unavoidable environmental impacts. It does not provide a direct rail connection to UCLA but does include an electric bus connection. This alternative has the lowest VMT reduction and FTA cost effectiveness and includes partial and temporary construction easements on VA property.

Alternative 3 is the only alternative that provides a rail connection to two major destinations in the Study Area, the Getty Center and UCLA. Alternative 3 has the longest end-to-end travel time at approximately 33 minutes. It has slightly higher capital cost than Alternative 4 (~4% more) and is forecasted to have approximately two-thirds of the ridership. Alternative 3 also has partial and temporary construction easements on VA property.

Alternative 4 is lower cost than Alternative 5 (approximately \$4.2 billion or 17% less) with similar mobility benefits and has the best FTA cost effectiveness. Alternative 4 also has the highest number of residential acquisitions (212 units, 202 of which are multifamily) and there are community concerns about an aerial structure along Sepulveda Boulevard in Sherman Oaks and Van Nuys. Additionally, the single MSF location, situated east of the Metrolink Van Nuys Station, conflicts with LADWP's Mid-Valley Water Facility Project

Alternative 5 is the highest ridership alternative with the fewest residential acquisitions among heavy rail alternatives. It is higher cost than Alternative 4 (approximately \$4.2 billion or 17% more) with similar mobility benefits. Additionally, the single MSF location, situated east of the Metrolink Van Nuys Station, conflicts with LADWP's Mid-Valley Water Facility Project.

Alternative 6 has the fastest end-to-end travel time (~18 minutes) and shortest alignment. It has the highest capital cost (\$24.4 billion) and would have trains arriving less frequently than other alternatives. It includes a mid-tunnel ventilation shaft in the Santa Monica Mountains on the LADWP Stone Canyon Reservoir parcel. Alternative 6 has the second most residential acquisitions of any alternative (127 multifamily units). Because it follows Van Nuys Boulevard in the San Fernando Valley, the route of the ESFV Light Rail Line, it does not have a station at Sherman Way and has the fewest number of stations of any alternative. Additionally, the single MSF location, situated east of the Metrolink Van Nuys Station, conflicts with LADWP's Mid-Valley Water Facility Project

Community and Stakeholder Engagement and Comments

The Draft EIR was released for public review and comment for 90-days from June 2, 2025 through August 30, 2025. Public notification was done in accordance with CEQA requirements and included direct mail (approximately 50,000 postcards), Community-Based Organization (CBO)-led door-to-door drop-offs (approximately 750 residences and 250 businesses), CBO-led public counter drop-offs (approximately 800 flyers across 30 locations), CBO-led transit intercept outreach, distribution of legal notices, social media posts and ads, e-blasts, press release, notices on the project website, bus car cards, information booths at local events, earned media and other methods. The Notice of Availability was filed with the California State Clearinghouse and mailed to public and responsible agencies, organizations, elected officials, and other interested parties. The Notice of Availability was distributed at the start of the comment period to announce the availability of the Draft EIR and to promote the public hearings.

During the 90-day public review period, Metro hosted five Information Sessions and five Public Hearings. Additionally, a round of five Community Meetings was held in the weeks leading up to the Draft EIR release to provide information about project status, benefits, costs and construction schedules. Each round of meetings included one virtual and four in-person sessions. In total, 8,074 formal comment submissions were received during the public review period. Comments were received by various methods, including oral and written comments at the Public Hearings, written comments at the Information Sessions, online submissions, project email submissions, mail submissions, and phone submissions. A majority of the comments (approximately 85%) were submitted through the online SmartComment form. Of the comments received, approximately 98% were from individuals, with the remainder from public agencies, elected officials, businesses and community organizations.

Overall, 7,308 of the comment submissions (90.5%) expressed support for the Project, either for a specific alternative(s) or the overall Project. In total, 69 of the comment submissions (0.9%) expressed opposition to the overall Project. Table 3 summarizes the number of comments that expressed support for a specific alternative or mode.

Table 3: Comment Submissions Expressing Support by Alternative and Rail Mode

	Number	Percent
Alternative 1	96/8,074	1.2%
Alternative 3	2,230/8,074	27.6%
Alternative 4	2,273/8,074	28.2%
Alternative 5	1,149/8,074	14.2%
Alternative 6	267/8,074	3.3%
Getty Center Station*	1,129/8,074	14.0%
Monorail	108/8,074	1.3%
Heavy Rail	729/8,074	9.0%
Overall Project	816/8,074	10.1%

*Comment submissions that indicated support for transit to the Getty Center, but did not specify an alternative or mode

Note: The total number of comments expressing support (7,308) is less than the sum of comments expressing support for each alternative and mode because some comments expressed support for more than one alternative or mode.

The most frequently cited environmental topics in public comments included noise and vibration; transportation; geology, soils, seismic and paleontological resources; and public services. The most frequently cited non-environmental topics included project design; project cost; and real estate and acquisitions. Engineering and design comments included those related to connections to other transit lines, the UCLA campus station, tunneling, and freeway proximity to stations. The planning issues included comments related to travel times, ridership, funding availability, cost-effectiveness, and connectivity of stations.

Some additional specific comments were received that could further inform LPA selection, design refinement and/or additional study. These include:

- *Los Angeles Department of Water and Power (LADWP)*: Expressed concern about alternatives and/or project features that could impact LADWP operations including but not limited to MSF sites east of the Van Nuys Metrolink station - which conflict with existing operations and the planned Mid-Valley Water Facility - and use of the Stone Canyon Reservoir property (all Alternatives except Alternatives 1 & 3 with Design Option 1 MSF).
- *Southern California Regional Rail Authority (SCRRA)*: Expressed concern about the maintenance and storage facility location adjacent to Metrolink Ventura County Line track, east of the Van Nuys Metrolink Station potentially interfering with Metrolink operations and/or future track or capacity expansion (all Alternatives except Design Option 1 MSF for Alternatives 1 & 3).
- *United States Department of Veterans Affairs (VA)*: Noted that no VA property at the West Los Angeles VA Medical Center, the Los Angeles National Cemetery or nearby GSA-owned Veterans Benefit Administration will be available for encroachment by any alternative and any alternative that did would need to be redesigned (Alternatives 1 & 3).
- *UCLA*: Noted support for the project and a station on or adjacent to the UCLA campus but expressed concern about construction impacts at the center of campus and suggested that Metro consider a less disruptive station location (Alternatives 3, 4, 5, 6).

LPA Selection and Recommendation

Based on technical evaluation and community and stakeholder input, Metro staff recommend Modified Alternative 5 (Attachment B) as the LPA. Alternative 5 as defined in the Draft EIR would be modified to connect to the Van Nuys G Line Station and future ESFV Light Rail Line station at the G Line along Van Nuys Boulevard. Modified Alternative 5 leverages the strengths of Alternative 5-high ridership, high frequencies, shorter station construction sites and avoiding the construction of a ventilation shaft in the Santa Monica Mountains-with connectivity benefits along Van Nuys Boulevard from Alternative 6.

Additionally, connecting directly to Van Nuys Boulevard in the San Fernando Valley (similar to Alternative 6) instead of using Sepulveda Boulevard reduces overall Project length and therefore would likely reduce Project costs as well as travel times.

The Project's goals were established as part of scoping for the Draft EIR and are an essential lens under which the development, analysis and evaluation of Alternatives are considered. Modified Alternative 5 aligns closely with these goals. The Draft EIR Goals and how the LPA staff recommendation meets each are outlined in Table 4.

Table 4: Draft EIR Goals and LPA Staff Recommendation Benefits

Draft EIR Goals	LPA Staff Recommendation Benefits
Improve Mobility	<ul style="list-style-type: none"> - Alternative 5 is highest ridership alternative - Alternative 5 travel time among fastest and anticipated to improve with LPA due to shorter, more direct route than Alternative 6 (fastest Draft EIR alternative)
Improve Accessibility and Promote Equity	<ul style="list-style-type: none"> - Direct connections to Metro D, E, G and ESFV Lines and Metrolink Ventura County Line
Support Community and Economic Development	<ul style="list-style-type: none"> - Stations close to major destinations and employment centers, including UCLA
Protect Environmental Resources and Support Sustainable Transportation System	<ul style="list-style-type: none"> - Alternative 5 has greatest VMT reduction - No construction and ventilation shaft in Santa Monica Mountains
Provide a Cost-Effective Solution and Minimize Risk	<ul style="list-style-type: none"> - Addresses key stakeholder comments - Shorter alignment and fewer stations (no station at Sherman Way due to planned ESFV station) to reduce Alternative 5 costs
Enhance Resiliency	<ul style="list-style-type: none"> - Providing a new travel corridor through the Sepulveda Pass adds resiliency to the transportation network.

Below is a summary of how Modified Alternative 5 addresses community and stakeholder input received during the Draft EIR public comment period:

- **Travel time.** Alternative 5 has an approximately 20-minute end-to-end travel time (only Alternative 6 - at approximately 18 minutes - is faster). A more direct alignment on Van Nuys Boulevard with Modified Alternative 5 provides opportunity for further improvement from the existing Alternative 5 and Alternative 6 travel times.
- **“Seamless” connections to other transit lines.** Modified Alternative 5 would provide connections to other planned and existing lines. Design refinements will focus on continuing to optimize these connections.
- **Station Locations.** Station locations for Modified Alternative 5 included many key destinations, such as an on-campus UCLA station, and transit connections, such as the Metrolink Ventura County Line and Metro’s ESFV Light Rail Line, G Line, D Line and E Line.
- **Cost Effectiveness.** Alternative 5 has the second-best FTA cost-effectiveness of the five alternatives and Modified Alternative 5 has the potential to lower costs while retaining or even improving benefits, increasing relative cost-effectiveness.
- **Property Acquisitions.** Alternative 5 had the fewest residential acquisitions of the heavy rail alternatives. Opportunities to limit and reduce residential and commercial acquisitions will be a focus of design refinements as the Project progresses.
- **Tunneling.** Modified Alternative 5 includes tunneling but utilizes a single bore tunnel configuration which removes the need for a ventilation shaft in the Santa Monica Mountains.
- **Potential to combine alternatives.** Multiple commenters inquired about the potential to combine alternatives, such as including the alignment of Alternative 6 with the design and operations approach of Alternative 5. Modified Alternative 5 combines elements of the

Alternative 5 and 6 alignments with the design and operations approach of Alternative 5.

- **Aesthetics and equity of aerial alignment along Sepulveda Boulevard.** Modified Alternative 5 does not include an aerial alignment along Sepulveda Boulevard.
- **Stone Canyon Reservoir and Dam.** Modified Alternative 5 would not require a mid-mountain tunnel ventilation shaft and therefore allows for a more direct alignment between a UCLA station and Van Nuys Boulevard.
- **Getty Center Station.** Modified Alternative 5 does not provide direct access to a Getty Center Station, which was the interest of many commenters. Providing better regional access to and through the Sepulveda Corridor will facilitate improved transit access to the Getty Center by bringing visitors closer on rail before transferring for the final few miles to connect to the Getty Center.
- **On-campus UCLA Station.** Modified Alternative 5 includes an on-campus UCLA station.

Implementation of modifications to Alternative 5 would require additional design, community engagement and environmental analysis. However, focusing this refinement on a single LPA aligns with the substantial work done to date and community input gathered.

Project Phasing

Project phasing allows for incremental investment so that benefits can be married with identified funds thereby allowing for a project's mobility benefits to be realized sooner. Most rail lines in Los Angeles have been built in phases in response to limitations on available funding.

When considering phasing of this Project, there are three logical options for an IOS:

1. Within the Westside;
2. Within the San Fernando Valley; or
3. Between the Westside and San Fernando Valley

Metro staff recommends focusing on an IOS that provides an alternative to the I-405 through the Sepulveda Pass. An IOS limited to the Westside or San Fernando Valley would not deliver that. Measure M planning documents originally identified the Project as between the G Line and the D Line. Option 3 is consistent with Measure M and is where the most benefit would be realized.

Modified Alternative 5 facilitates connections to the transit network as part of an IOS between the San Fernando Valley and Westside (the G Line and the D Line). An IOS on Sepulveda Boulevard (included in the Draft EIR Alternative 5) would require transit users on the ESFV Line (on Van Nuys Boulevard) to transfer to an east-west connection (i.e. the G Line) for approximately a mile to reach the Project. The ESFV Line will serve as an important feeder service for the Project, including providing a link to the Metrolink Antelope Valley and Ventura County Lines. Requiring an additional transfer for passengers reduces the time competitiveness of transit and therefore anticipated ridership on the system. Connections to transit lines are critical as approximately 97% of riders are forecasted to access the Project by non-auto modes.

A Modified Alternative 5 IOS aligns closely with the goals identified in the DEIR. The Draft EIR Goals and how the IOS staff recommendation meets each are outlined in Table 5.

Table 5: Draft EIR Goals and IOS Staff Recommendation Benefits

Draft EIR Goals	IOS Staff Recommendation Benefits
Improve Mobility	- IOS provides alternative to congested 405 through the Sepulveda Pass
Improve Accessibility and Promote Equity	- IOS provides direct connections to D, G and ESFV Lines
Support Community and Economic Development	- Stations close to major destinations and employment centers, including UCLA
Protect Environmental Resources and Support Sustainable Transportation System	- No construction and ventilation shaft in Santa Monica Mountains
Provide a Cost-Effective Solution and Minimize Risk	- Phasing allows for project's mobility benefits to be delivered earlier, as funding is available, and incrementally
Enhance Resiliency	- Providing a new travel corridor, within IOS, through the Sepulveda Pass adds resiliency to the transportation network.

Below is a summary of how a Modified Alternative 5 IOS addresses community and stakeholder input received during the Draft EIR public comment period:

- **Travel time.** Based on station-to-station travel times developed for the Draft EIR for Alternatives 5 and 6, a Modified Alternative 5 IOS is projected to have an approximately 10-minute travel time between the G Line in the San Fernando Valley and the D Line in Westwood, providing substantial travel time benefits.
- **“Seamless” connections to other transit lines.** A Modified Alternative 5 IOS provides direct connections to the Metro D, G and ESFV Lines.
- **Station Locations.** Station locations for Modified Alternative 5 include key destinations, such as an on-campus UCLA station, and transit connections, such as the Metro D, G and ESFV Lines.
- **Impacts to LADWP Mid-Valley Water Facility.** Implementing a phasing approach with a focus on connecting the San Fernando Valley and Westside will result in the need to identify a new maintenance and storage strategy within the initial phase thereby avoiding impacts to LADWP's facility.
- **On-campus UCLA Station.** A Modified Alternative 5 IOS includes an on-campus UCLA station.
- **Project Funding and Funding Gap.** Modified Alternative 5 is well suited to facilitate project phasing with a central IOS considering funding constraints.

Project Funding Plan

The preliminary capital cost estimate for Alternative 5 is \$24.2 billion (in 2023\$). If approved, the cost estimate would be updated to reflect Modified Alternative 5. The estimate exceeds the \$5.7B (2015\$) identified for the Project in the Measure M Expenditure Plan. Of the funds identified in the Measure M Expenditure Plan, \$2.54B (2015\$) is Measure M Funding and the rest is an assumption of local, state, federal and other funding sources. Metro anticipates the need for additional funding and financing for the Project, including from federal, state and local sources as well as private investment

through a potential P3.

Current secured funding represents 14% of the overall capital cost estimate. However, at this early phase of project development, this is not uncommon. Table 6 provides information about other recent Metro transit projects and the funding that had been secured at the selection of an LPA. Of note is that many of these projects are being or have been advanced incrementally or in phases in response to limitations on available funding. In fact, the three most recently approved Metro rail projects (project approval occurs at certification of a Final EIR, a future step in the project development process) were all for an initial phase. While the design or cost estimate for an IOS of the Sepulveda Transit Corridor has not yet been completed, an initial phase would have a higher percentage of funding secured than the overall Project.

Table 6: Percentage of Funding Secured for Metro Transit Corridor Projects at LPA Selection

Transit Corridor Project	Month of LPA	Funding Secured	Capital Cost Estimate for Full Project/ Alignment	Capital Cost Estimate for IOS	% Funding Secured for Full Project	% Funding Secured for IOS/Section
C Line Extension to Torrance	May 2024	\$1.4B (2024)	\$2.2B (2024)	n/a	64%	n/a
Eastside Transit Corridor Light Rail Transit (LRT)	November 2022	\$3.4B (2022)	\$10.2B (2022)	\$7.9B to Montebello (2022)	33%	43%
Southeast Gateway Line LRT	January 2022	\$3.4B (2021)	\$15.5B to LAUS (2021)	\$6.9B to Pioneer (2021)	22%	50%
East San Fernando Valley LRT	June 2018	\$1.22B (2018)	\$1.46B (2018)	n/a	84%	n/a
Crenshaw/ LAX Transit Corridor LRT (K Line)	December 2009	\$1.3B (2009)	\$1.5B (2009)	n/a	87%	n/a
Westside Subway Extension (D Line)	October 2010	\$2.9B (2009\$)	\$4.4B (2009\$)	\$1.9B (Fairfax); \$3.3B (Century City/Santa Monica) (2009\$)	66%	89% (Century City/Santa Monica)

Dollars are estimated in year of expenditure unless noted. Parentheses indicate year estimate was published.

The proposed funding strategy is consistent with practices advanced for previous projects as shown in Table 6. Metro has successfully competed for additional funding after LPA selection for many transit corridor projects. Should the Metro Board select an LPA for this Project, Metro would follow its

past practice and leverage the existing funding and pursue additional funds to close the gap.

Following the selection of an LPA, opportunities for cost reduction will continue to be explored including developing a project phasing strategy so that incremental investment and benefits can be married with available funds, as well as completion of the assessment of the viability of public-private partnership as a delivery strategy.

Metro Cost Benefit Analysis

In July 2025, the Board adopted a Cost Benefit Analysis (CBA) methodology framework for evaluating project alternatives, including assessing the regional economic impacts of investment and identifying benefits relative to the costs of investment. The CBA includes two components: Weighted Benefit Analysis and Benefit-Cost Ratio, discussed in Attachment C.

DETERMINATION OF SAFETY IMPACT

Approval of this item and selection of an LPA will not impact the safety of Metro's customers or employees.

FINANCIAL IMPACT

The Fiscal Year 2025-26 budget includes approximately \$75.9 million in Project 460305 for professional services between Countywide Planning and Development and Program Management. Since this is a multi-year project, Cost Center Managers, Chief Program Management Officer and Chief Planning Officer will be responsible for budgeting in future years.

Impact to Budget

Funding for this action comes from Measure R 35% Transit Capital. These funds are not eligible for bus or rail operating expenses.

EQUITY PLATFORM

The Project will connect the San Fernando Valley and Westside with fast, reliable and safe transit providing increased access to jobs, housing, education, healthcare and major destinations. Equity Focus Communities (EFCs) within the Study Area are around UCLA and at the north end of the corridor around Van Nuys. Depending on the alternative, the number of people living in EFCs within a ½ mile distance of a rail station ranges from 22,700 to 33,000. By 2045, it is forecast that the Project would carry between 17,300 and 30,500 people each day who are coming from EFCs.

Starting with scoping for the Draft EIR in November 2021, the Project identified six goals, one of which was "Improve Accessibility and Promote Equity." The objectives associated with this goal were "Improve Access for Equity Focus Communities" and "Target Infrastructure and Service Investments Toward Those with the Greatest Mobility Needs." The Project goals and objectives inform the development and evaluation of alternatives throughout the environmental process. Additionally, an equity impact analysis was undertaken for the Project to provide a focused review of alternatives through an equity lens.

Since initiating the Project, Metro has conducted a broad range of activities, including booths at events with bilingual staff, outreach at transit stops and coordination with elected officials representing the communities throughout the Project area. Since the start of the environmental process, Metro has hosted 30 public meetings and participated in over 105 booths at community or other events. This resulted in a public meeting attendance of over 5,000 people and in-person engagement of an additional 10,500 people at other community events. Also, bilingual meeting notices, fact sheets, eblasts and newspapers ads have been utilized to reach Spanish-speaking stakeholders.

The Project team deployed a robust CBO partnering strategy designed to build critical awareness and engagement in the Project to increase community involvement within EFCs, empowering stakeholders to participate throughout the duration of the study. For these efforts, the CBO partners led several notification tactics, including door-to-door distribution, public counter drop-offs, and flyers at transit intercepts in predominantly Spanish-speaking, lower-income communities.

Public input throughout the process has driven the development of alternatives and the over 8,000 comment submissions received during the Draft EIR circulation informed the staff recommendation on the LPA.

Staff remains committed to continued extensive engagement and outreach efforts with corridor communities as the LPA is refined and the environmental process continues. Special outreach efforts will continue to be made to reach out to people of color, low income, limited English proficiency populations and persons with disabilities.

VEHICLE MILES TRAVELED OUTCOME

VMT and VMT per capita in Los Angeles County are lower than national averages, the lowest in the SCAG region, and on the lower end of VMT per capita statewide, with these declining VMT trends due in part to Metro's significant investment in rail and bus transit.* Metro's Board-adopted VMT reduction targets align with California's statewide climate goals, including achieving carbon neutrality by 2045. To ensure continued progress, all Board items are assessed for their potential impact on VMT.

This item supports Metro's systemwide strategy to reduce VMT through planning activities that will benefit and further encourage transit ridership, ridesharing, and active transportation. Metro's Board-adopted VMT reduction targets were designed to build on the success of existing investments, and this item aligns with those objectives.

VMT was analyzed through the VMT analysis completed for the Sepulveda Transit Corridor Draft EIR. The analysis identified a reduction in VMT due to the implementation of the Project compared to conditions without the Project, which demonstrates an overall VMT benefit. Specifically, the VMT analysis in the Draft EIR identifies that all Alternatives demonstrate a reduction in daily regional VMT ranging from a reduction of 341,800 (Alternative 1) to a reduction of 775,100 (Alternative 5) compared to the Horizon Year (2045) No Project Alternative conditions.

*Based on population estimates from the United States Census and VMT estimates from Caltrans' Highway Performance Monitoring System (HPMS) data between 2001-2019.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

The Project supports the following strategic plan goals identified in Vision 2028: Goal 1: Provide high-quality mobility options that enable people to spend less time traveling; Goal 2: Deliver outstanding trip experiences for all users of the transportation system; Goal 3: Enhance communities and lives through mobility and access to opportunity; Goal 4: Transform LA County through regional collaboration and national leadership; and Goal 5: Provide responsive, accountable and trustworthy governance within the Metro organization.

ALTERNATIVES CONSIDERED

The Board may decide not to select an LPA for the Sepulveda Transit Corridor Project. This is not recommended as it may delay project delivery moving it further from its Measure M schedule, fail to address the Vision 2028 goals, delay meeting the Project goals and objectives, and be unresponsive to community support for a rail connection between the San Fernando Valley and Westside.

Instead of adopting the staff recommendation, the Board may decide to select another alternative as the Project's LPA. This is not recommended because Modified Alternative 5 aligns with project goals and objectives and facilitates phasing and other cost and risk reduction strategies. The alternatives evaluated in the Draft EIR are identified as follows along with staff's reasoning for why the alternative was not recommended.

- Alternative 1: This is not recommended due to more limited mobility benefits compared to other alternatives. While the alternative has a lower cost, the more limited benefits outweigh the reduction in cost.
- Alternative 3: This is not recommended due to higher costs without commensurate increases in mobility benefits.
- Alternative 4: This is not recommended due to more limited transit connectivity of an initial phase connecting the Valley and Westside.
- Alternative 5: This is not recommended due to more limited transit connectivity of an initial phase connecting the Valley and Westside.
- Alternative 6: This is not recommended due to physical limitations of the design approach which result in the need to construct a mid-mountain ventilation and shaft, longer station construction areas and ultimately more limited train frequencies.
- No Project Alternative: This is not recommended as it does not meet Project goals and objectives, fail to address the Vision 2028 goals and would be unresponsive to community support for a rail connection between the San Fernando Valley and the Westside.

NEXT STEPS

Upon Board approval of the LPA, staff will initiate design refinement efforts consistent with the LPA, which includes evaluating phasing, identifying opportunities for value engineering, considering MSF locations that support the phasing strategy, evaluating the P3 delivery model, and making refinements to Alternative 5 to allow for connection to the G Line at Van Nuys Boulevard. Design refinements will also consider comments received on the Draft EIR, including incorporating input from LADWP consistent with the Memorandum of Understanding between LADWP and LA Metro (Attachment D). Staff anticipate returning to the Board in Spring 2026 to amend contracts to support

this effort.

Following design refinements, staff will then continue to advance the CEQA environmental clearance process and approach FTA to initiate the NEPA (National Environmental Policy Act) process. This will include updates to the project description to reflect the selected LPA and subsequent refinements. Staff will also be advancing additional design and technical analyses including additional geotechnical and subsurface investigations. Throughout this process, staff will continue coordination with key agencies and stakeholders to obtain further clarifications on Draft EIR comments and funding advocacy.

As part of design refinement efforts, cost estimates, delivery schedules and other analyses would be updated. These will inform the P3 Business Case, which will evaluate the value trade-offs between utilizing a P3 delivery model and a traditional delivery method for the project.

Throughout this process, community outreach would be conducted, including but not limited to, gathering public input on Project refinements throughout the CEQA and NEPA environmental processes.

ATTACHMENTS

Attachment A - Sepulveda Transit Corridor Draft EIR Executive Summary

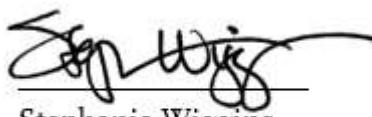
Attachment B - Sepulveda Transit Corridor Modified Alternative 5 Map

Attachment C - Sepulveda Transit Corridor Cost-Benefit Analysis

Attachment D - Memorandum of Understanding between LA Metro and LADWP for Cooperation and Coordination on the Sepulveda Transit Corridor Project

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SEPULVEDA TRANSIT CORRIDOR PROJECT

Draft Environmental Impact Report Executive Summary

SCH 2021110432

June 2025



Metro®

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
<i>Improve Mobility</i>
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
<i>Improve Accessibility and Promote Equity</i>
1. Improve access for Equity Focus Communities (EFC) 2. Target infrastructure and service investments towards those with the greatest mobility needs
<i>Support Community and Economic Development</i>
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
<i>Protect Environmental Resources and Support a Sustainable Transportation System</i>
1. Reduce vehicle miles traveled (VMT) 2. Reduce greenhouse gas emissions 3. Reduce air pollutant emissions 4. Minimize impacts to environmental resources
<i>Provide a Cost-Effective Solution and Minimize Risk</i>
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
<i>Enhance Resiliency</i>
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.

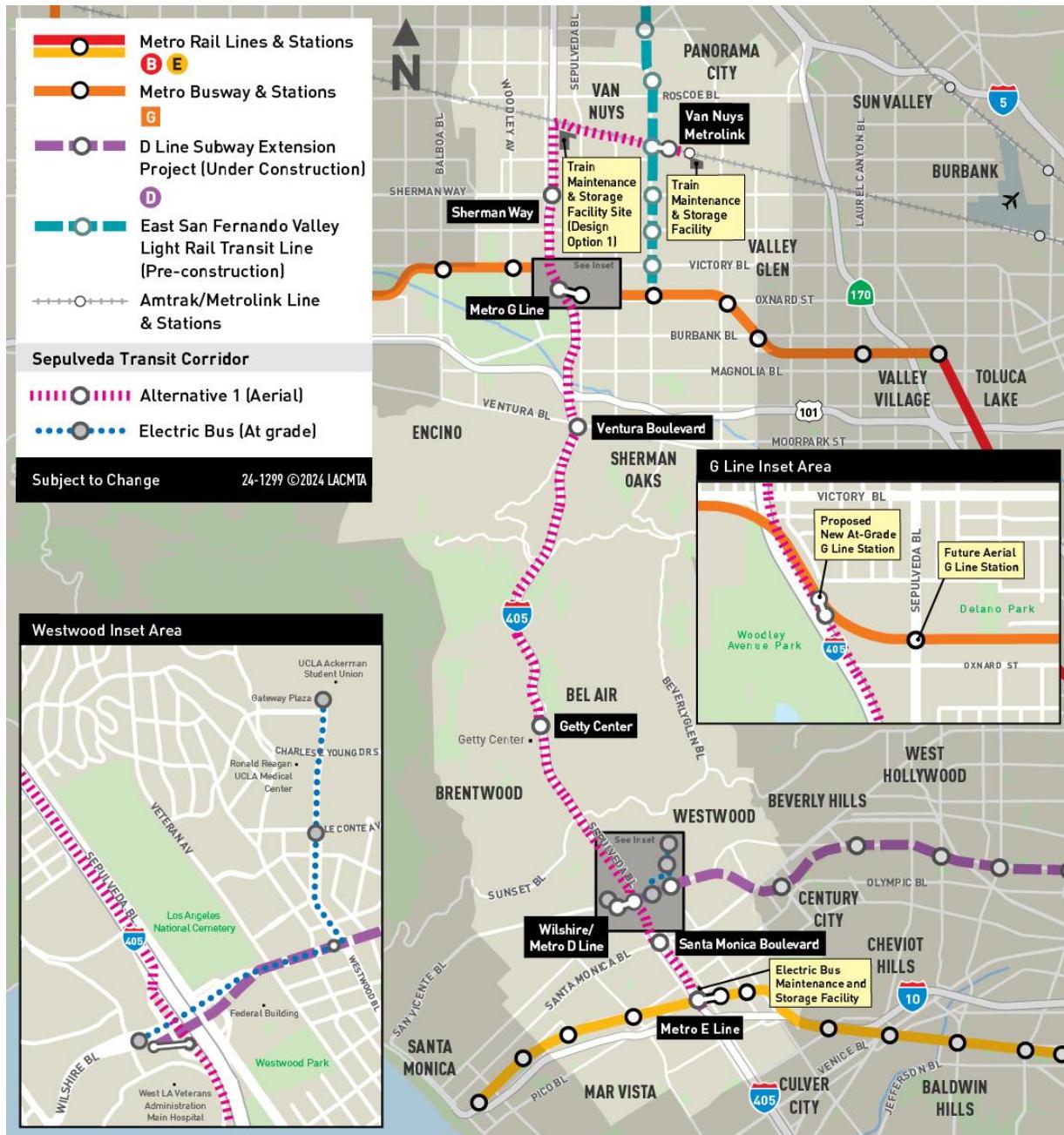
ES-6.2.1 Alternative 1

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		
	<i>Aesthetics Operational Impacts</i>					
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
	Applicable Mitigation	NA	NA	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	SU	LTS
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
	Applicable Mitigation	NA	MM AES-1	MM AES-1	MM AES-1	MM AES-1
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS
<i>Air Quality Construction Impacts</i>						
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
	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
	Impacts After Mitigation	LTS	SU	SU	SU	SU
	Impacts Before Mitigation	LTS	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
<i>Biological Resources Operational Impacts</i>							
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
	Applicable Mitigation	NA	MM BIO-3	MM BIO-3	MM BIO-3	MM BIO-3
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
<i>Biological Resources Construction Impacts</i>						
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
	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
	Impacts After Mitigation	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
	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
	Impacts After Mitigation	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-12, MM BIO-15 through MM BIO-17, MM BIO-20, MM BIO-22, MM BIO-23, MM BIO-26
	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		
<i>Cultural Resources Operational Impacts</i>						
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
	Applicable Mitigation	NA	MM CUL-2	NA	NA	NA
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS
<i>Cultural Resources Construction Impacts</i>						
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
	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
	Impacts After Mitigation	LTS	SU	SU	SU	LTS
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
	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
	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	LTS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM CUL-8	MM CUL-8	MM CUL-8	MM CUL-8
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
<i>Geology, Soils, Seismicity, and Paleontological Resources Construction Impacts</i>						
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
	Applicable Mitigation	NA	NA	MM GEO-2	MM GEO-2	MM GEO-2
	Impacts After Mitigation	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
	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
	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	LTS	PS	PS	PS	PS
	Applicable Mitigation	NA	MM GEO-5	MM GEO-5	MM GEO-5	MM GEO-5
	Impacts After Mitigation	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
	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
	Impacts After Mitigation	LTS	LTS	SU	SU	SU
<i>Hazards and Hazardous Materials Operational Impacts</i>						
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	PS
	Applicable Mitigation	NA	NA	NA	NA	MM HAZ-1 through MM HAZ-4
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
<i>Hazards and Hazardous Materials Construction Impacts</i>						
Impact HAZ-2: Would the project create a significant hazard to the public or the	Impacts Before Mitigation	LTS	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
<i>Land Use and Planning Operational Impacts</i>							
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
<i>Land Use and Planning Construction Impacts</i>							
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
<i>Noise and Vibration Operational Impacts</i>							
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
	Applicable Mitigation	NA	NA	NA	MM VIB-4.1	MM VIB-5.1
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
<i>Noise and Vibration Construction Impacts</i>						
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
	Applicable Mitigation	NA	MM NOI-1.2	MM NOI-3.2	MM NOI-4.2	NA
	Impacts After Mitigation	LTS	SU	SU	SU	LTS
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
	Applicable Mitigation	NA	MM VIB-1.2	MM VIB-3.1	MM VIB-4.2	MM VIB-5.2
	Impacts After Mitigation	LTS	SU	SU	SU	SU
<i>Public Services Construction Impacts</i>						
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
	Applicable Mitigation	NA	NA	NA	MM TRA-4	MM TRA-4
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
<i>Transportation Operational Impacts</i>						
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
	Applicable Mitigation	NA	NA	NA	MM TRA-7	MM TRA-7
	Impacts After Mitigation	SU	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
<i>Transportation Construction Impacts</i>							
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, 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		
<i>Tribal Cultural Resources Construction Impacts</i>						
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
	Applicable Mitigation	NA	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
<i>Wildfire Operational Impacts</i>						
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
	Applicable Mitigation	NA	MM TRA-4	MM TRA-4	MM TRA-4	MM TRA-4
	Impacts After Mitigation	NI	LTS	LTS	LTS	LTS
<i>Wildfire Construction Impacts</i>						
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
	Applicable Mitigation	NA	MM TRA-4	MM TRA-4	MM TRA-4	MM TRA-4
	Impacts After Mitigation	NI	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	LTS	PS
	Applicable Mitigation	NA	MM SAF-1, MM SAF-2	MM SAF-1, MM SAF-2	MM SAF-1, MM SAF-2	NA
	Impacts After Mitigation	LTS	LTS	LTS	LTS	LTS
Impact WFR-3: Would the project require the installation or maintenance of associated	Impacts Before Mitigation	NA	PS	PS	NI	PS

CEQA Impact Topic	Applicable Mitigation	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
<i>Cumulative Operational Impacts</i>							
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
<i>Cumulative Construction Impacts</i>							
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	Operation
	HWQ-2: Groundwater HWQ-3: Alter drainage HWQ-4: Flood hazard, tsunami, or seiche zones HWQ-5: Conflict with water quality control plan	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	Operation
	POP-2: Displace people or housing	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	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	Operation
	US-2: Water supplies US-3: Wastewater US-4: Solid waste US-5: Solid waste statutes and regulations	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		
	<i>Biological Resources Operational Impacts</i>				
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
	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
	Impacts After Mitigation	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
	Applicable Mitigation	MM BIO-3	MM BIO-3	MM BIO-3	MM BIO-3
	Impacts After Mitigation	LTS	LTS	LTS	LTS
<i>Biological Resources Construction Impacts</i>					
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
	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
	Impacts After Mitigation	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
	Applicable Mitigation	MM BIO-11	MM BIO-11	MM BIO-11	MM BIO-12
	Impacts After Mitigation	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		NI = No Impact			
PS = Potentially Significant		SU = Significant and Unavoidable			
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
	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
	Impacts After Mitigation	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
	Applicable Mitigation	MM CUL-8	MM CUL-8	MM CUL-8	MM CUL-8
	Impacts After Mitigation	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
	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
	Impacts After Mitigation	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
	Applicable Mitigation	MM GEO-5	MM GEO-5	MM GEO-5	MM GEO-5
	Impacts After Mitigation	LTS	LTS	LTS	LTS
	Impacts Before Mitigation	PS	PS	NI	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
	Impacts After Mitigation	LTS	LTS	NI	LTS
<i>Hazards and Hazardous Materials Construction Impacts</i>					
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
	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
	Impacts After Mitigation	LTS	LTS	LTS	LTS
<i>Land Use and Planning Operational Impacts</i>					
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
	Applicable Mitigation	NA	NA	NA	NA
	Impacts After Mitigation	SU	NI	NI	SU
<i>Land Use and Planning Construction Impacts</i>					
Impact LUP-1: Would the project physically divide an established community?	Impacts Before Mitigation	PS	PS	PS	PS
	Applicable Mitigation	MM TRA-4	MM TRA-4	MM TRA-4	MM TRA-4
	Impacts After Mitigation	LTS	LTS	LTS	LTS
<i>Noise and Vibration Construction Impacts</i>					
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
	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
<i>Tribal Cultural Resources Construction Impacts</i>						
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
<i>Utilities and Service Systems Operational Impacts</i>						
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
<i>Wildfire Construction Impacts</i>						
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					
<i>Cumulative Operational Impacts</i>					
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
	Applicable Mitigation	NA	NA	NA	NA
	Impacts After Mitigation	SU	LTS	LTS	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
<i>Aesthetics</i>	
MM AES-1	Temporary privacy screens during construction
<i>Air Quality</i>	
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
<i>Biological Resources</i>	
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 gravel 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
<i>Cultural Resources</i>	
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
<i>Geology</i>	
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
<i>Hazards and Hazardous Materials</i>	
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
<i>Land Use and Planning</i>	
MM LUP-1	Coordination to amend open space and community plans
<i>Noise and Vibration</i>	
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
<i>Wildfire</i>	
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
<i>Tribal Cultural Resources</i>	
MM TCR-1	Native American Monitoring
MM TCR-2	Unanticipated Discovery of Human Remains
<i>Transportation</i>	
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 (PM₁₀) 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 PM₁₀ and fine particulate matter of diameter less than 2.5 microns (PM_{2.5}) LSTs for construction activity in the Valley and exceed the PM₁₀ 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 PM₁₀ 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.

Attachment B – Sepulveda Transit Corridor Modified Alternative 5



Note: Alternative subject to refinements as project design advances.

SEPULVEDA TRANSIT CORRIDOR PROJECT

Metro Cost Benefit Analysis (CBA)

In July 2025, the Board adopted a CBA framework for evaluating project alternatives, including assessing the regional economic impacts of investment and identifying benefits relative to the costs of investment. The CBA includes two component – Weighted Benefits Analysis and Benefit-Cost Ratio – as described below and used to evaluate the Sepulveda Transit Corridor Draft Environmental Impact Report (EIR) Alternatives. The evaluation is based on data collected during the Draft EIR process.

Weighted Benefits Analysis: A points-based evaluation comparing the alignments across five goals that are weighted per Metro-adopted CBA methodology. This considers relevant quantitative and qualitative metrics within each of the five goals that are scored relative to each other on a 7-point scale with seven being the highest/best performing.

Table 1: Weighted Benefit Score

Goals	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6	Key Performance Indicators Evaluated
	Average Score by Goal (Unweighted)					
Mobility & Accessibility (Weight: 40%)	4.6/7	5.6/7	6.8/7	6.8/7	6.3/7	Travel time; project trips; new riders; travel time savings; service frequencies; transfer times at key connection points; non-auto mode share access to stations; proximity to jobs and residents; including Equity Focus Communities (EFC) households without access to a car
Safety & Health (Weight: 15%)	4.8/7	5.2/7	5.8/7	5.8/7	5.2/7	Proximity to healthcare and parks, exposure to noise during construction and operations, average emergency response times, CalEnviroScreen 4.0 scores.
Environmental Sustainability (Weight: 15%)	4.2/7	4.4/7	5.8/7	6.2/7	5.2/7	Reductions in vehicle miles traveled, energy consumption, air quality criteria pollutants and greenhouse gas emissions, significant and unavoidable impacts during construction or operations, including historical resources, peak construction criteria pollutant emissions, and impacts to ordinance protected trees and shrubs, and areas of potentially sensitive vegetation.
Operational Sustainability & Delivery (Weight: 15%)	5.8/7	5.4/7	5.6/7	5.3/7	5.3/7	Project construction and operation and maintenance costs, capital cost funding gap, anticipated opening month, potentially impacted utilities, and FTA New Starts criteria measures including annualized cost per project trip, new systemwide transit trips, and annual project trips.
Economic Impact (Weight: 15%)	5.2/7	5.7/7	4.8/7	5.2/7	5.0/7	Number of individuals displaced, estimated parcels to be acquired, station proximity to nearest commercially zoned property, person-year jobs created during construction, total regional economic benefits due to increased mobility
Total Weighted Score	4.8/7	5.3/7	6.0/7	6.1/7	5.7/7	Project provides significant benefits for all alternatives. Alternative 5 performs the strongest

The Weighted Benefits Analysis component of the CBA finds that the Project provides significant benefits locally and regionally across all alternatives. The performance of each alternative varies within each goal with Alternatives 4 and 5 performing strongest for Mobility & Accessibility and Safety & Health. Alternative 5 performs the strongest for Environmental Sustainability. Alternative 1 performs the strongest for Operational Sustainability and Delivery. Alternative 3 performs the best for Economic Impact. Overall, Alternative 5 performs the best with a weighted score of 6.1, followed by Alternative 4 with a weighted score of 6.0, Alternative 6 with a weighted score of 5.7, Alternative 3 with a weighted score of 5.3 and Alternative 1 with a weighted score of 4.8.

Benefit-Cost Ratio: Compares the monetized costs of the Project, including capital and operating costs, to the monetized benefits of the Project, including travel time savings, traffic safety, active transportation health benefits, air pollution reduction benefits and regional economic benefits due to improved regional access and travel. A higher ratio of benefits to costs means that there are more monetized benefits for every dollar spent. However, it is important to note that many costs and benefits cannot be monetized. The results of this analysis are presented in Table 2.

Table 2: Benefit-Cost Ratio Findings

	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
Benefit-Cost Ratio	4.2	3.5	5.4	4.6	4.3

** BCRs are unique to each project and not to be compared across projects, due to specific construction and operation years being considered, travel demand modeling years, and other factors.*

The analysis reveals that all five alternatives offer significant benefits in comparison to their costs. Alternative 4 has the highest BCR (highest monetized benefits compared to costs). Alternative 4 is expected to produce \$5.40 of monetized benefits per dollar invested over a 30-year analysis period. Alternative 5 is expected to produce \$4.60 as it has similar benefits to Alternative 4 but a higher cost. Alternative 6 is expected to produce \$4.30 as it has lower benefits than Alternatives 4 and 5 but a higher cost. Alternative 1 is expected to produce \$4.20 as while it has lower benefits, it has the lowest cost. Alternative 3 is expected to produce \$3.50 as its higher relative costs are not accompanied by higher relative benefits.

**MEMORANDUM OF UNDERSTANDING
BY AND BETWEEN
LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY
and
LOS ANGELES DEPARTMENT OF WATER AND POWER**

**FOR COOPERATION AND COORDINATION ON THE SEPULVEDA TRANSIT CORRIDOR
PROJECT**

This Memorandum of Understanding (“MOU”) is entered into by and between the Los Angeles County Metropolitan Transportation Authority (“LA Metro”) and Los Angeles Department of Water and Power (“LADWP”), (referred to herein collectively as the “Participants”), regarding cooperation and coordination to advance the Sepulveda Transit Corridor Project (“the Project”) in a way that continues to support the essential services both agencies provide.

RECITALS

- A. Whereas, LA Metro is responsible for planning, designing, constructing and operating transportation projects and programs within Los Angeles County; and
- B. Whereas, LADWP is a municipal utility serving the water and electricity needs of Los Angeles, organized and existing under the Charter of the City of Los Angeles; and
- C. Whereas, LA Metro is developing the Project to provide a crucial north-south transit connection between the San Fernando Valley and the Westside of Los Angeles; and
- D. Whereas, in June 2025, Metro issued a Draft Environmental Impact Report (EIR) for the Project describing and analyzing five build alternatives; and
- E. Whereas, each of these alternatives as identified in the Draft EIR would interface with LADWP-owned properties and facilities; and
- F. Whereas, LA Metro will continue to fully reimburse LADWP for its expenses associated with reviewing preliminary and final engineering design plans, reports, specifications, drawings, agreements and other documents pertinent to the Project consistent with the terms of the existing work orders (Power: 9300000000F102SC; Water Real Estate: 9300000000F103SC; Water Service: 9300000000F103SC); and
- G. Whereas, LADWP reviewed the Draft EIR and provided comments to LA Metro regarding the Project; and
- H. Whereas, LADWP requires that the Project not have an unmitigable adverse impact on provision of water and power within LADWP’s service area, nor cause hardship on LADWP’s ability to conduct business.

Based on a shared interest of advancing the Project and maintaining essential services to Angelenos, LA Metro and LADWP hereby acknowledge and agree to the following principles/commitments:

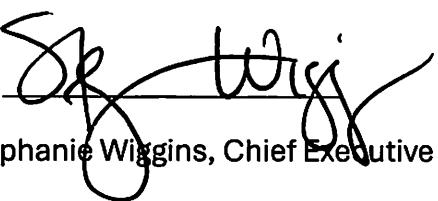
1. LA Metro recognizes that public entities having jurisdiction and/or rights in and around the Project, including LADWP, have existing facilities as well as infrastructure and development plans that may relate to or be impacted by the Project.
2. The purpose of this MOU is to establish an organizational framework whereby LA Metro and LADWP engage, where possible, as partners for the development of the Project, including continued planning, design and eventual construction of improvements that preserve and protect existing and planned water and power operations while also providing for implementation of the Project.
3. LA Metro and LADWP will coordinate and cooperate in good faith, including with other stakeholders as appropriate, on the following areas related to the Project, including, without limitation:
 - a. LA Metro will identify a location to maintain and service rail vehicles that does not include LADWP properties at 7600 Tyrone Avenue or 7501 Tyrone Avenue (APNs: 2215-001-913; and 2215-001-910);
 - b. LA Metro will work collaboratively with LADWP to refine alignments in the vicinity of Stone Canyon Reservoir Property to address LADWP comments;
 - c. LA Metro and LADWP will work collaboratively to identify existing LADWP infrastructure that must be protected in place or relocated in order to accommodate the Project while ensuring that LADWP is able to maintain its existing level of operations and maintenance for its water and power systems; and
 - d. LA Metro and LADWP will work collaboratively to address other comments provided in LADWP's August 27, 2025 comment letter on the Draft EIR for the Project, along with other areas of concern that may arise that require coordination and resolution.
4. This MOU is intended as an initial step to facilitate cooperation, coordination and intentions as set forth herein. The Participants expect that Project characteristics, impacts and mitigations may be defined in more detail and further refined as the Project design continues to advance.
5. The Participants agree to collaborate, cooperate and coordinate with each other, including their respective staff and/or consultants, to achieve the objectives of this MOU including, among other actions:
 - a. The participation in recurring meetings and/or workshops, within reason;

- b. The exchange of technical and other information; and
- c. Good faith negotiation of more detailed agreements where needed.

6. The Participants agree to work diligently together and in good faith, using their best efforts to mitigate impacts to provision of water and power services within the Project area, perform relocations where mitigation cannot be achieved, and to resolve any unforeseen issues and disputes arising out of the performance of this MOU.
7. This MOU is a voluntary initiative and does not impose any legally binding rights, limitations or obligations upon the Participants. Each party shall bear its own costs related to this effort unless otherwise agreed in writing.
8. This MOU is not intended to amend or impact in any way other existing written agreements or MOUs that either Participant may have entered pertaining to this Project.
9. This MOU is effective from the date of its last signature and shall remain in effect until another MOU or agreement regarding this Project is executed between the Participants, the Project is completed, or one or both Participants withdraw from the MOU, whichever is earlier.
10. This MOU can only be amended by the Participants in writing. Each Participant may, at any time, withdraw from this MOU by providing a written notice to the other Participant 60 days in advance of the date of withdrawal.
11. This MOU incorporates, by reference, the recitals into the body of the MOU.

For the Los Angeles County Metropolitan Transportation Authority

By:



Stephanie Wiggins, Chief Executive Officer

Date:

1/9/25

For the Los Angeles Department of Water and Power

By:



Janisse Quinones, Chief Executive Officer

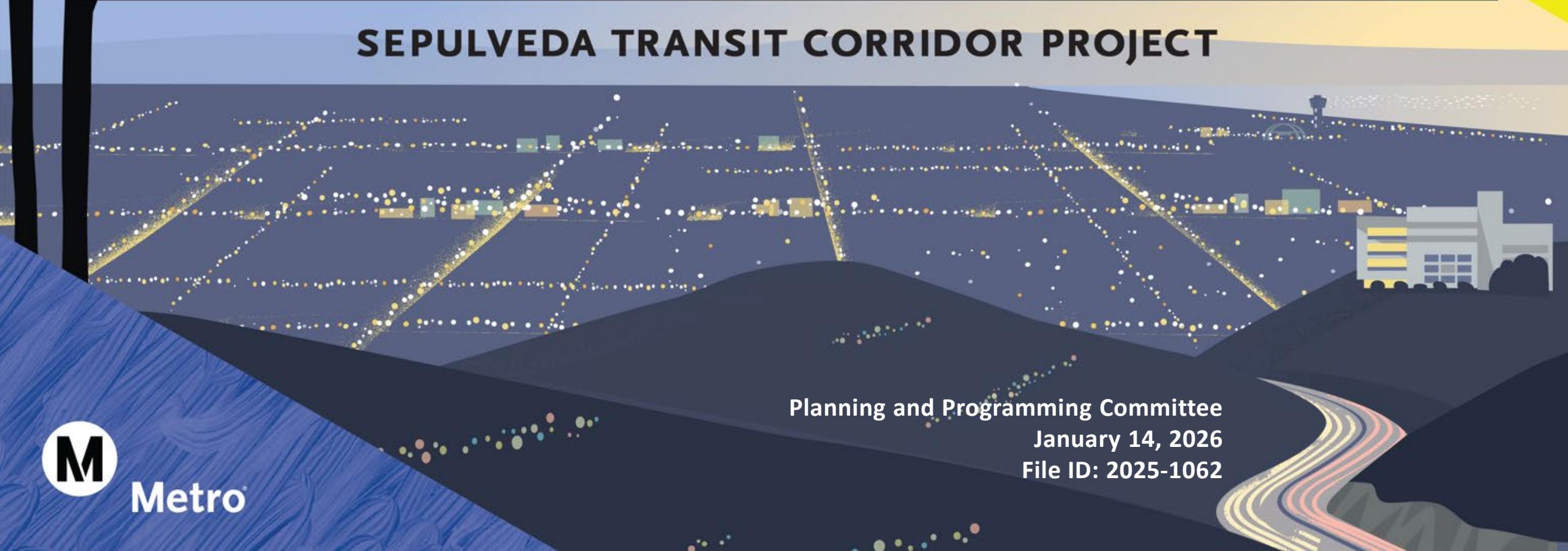
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1/9/25



Next stop: exploring alternatives to the 405.

SEPULVEDA TRANSIT CORRIDOR PROJECT



Planning and Programming Committee
January 14, 2026
File ID: 2025-1062



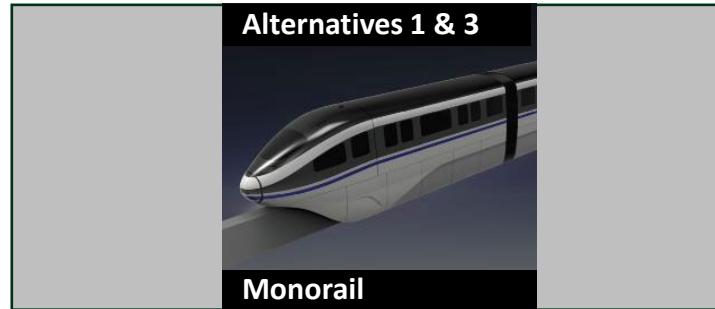
Metro

Recommendation

CONSIDER:

- A. APPROVING the Locally Preferred Alternative (LPA) as Modified Alternative 5: Heavy rail transit underground between the Van Nuys Metrolink Station and the E Line Expo/Sepulveda Station modified to provide a connection to the Metro G Line and East San Fernando Valley (ESFV) Light Rail Line at Van Nuys Boulevard.
- B. AUTHORIZING further design refinement and advancement of the LPA to address project cost, risk, and comments received on the Draft Environmental Impact Report (EIR), including but not limited to defining an Initial Operating Segment (IOS) and a phasing plan with priority given to connecting the San Fernando Valley—at the Metro G Line and ESFV Light Rail Line at Van Nuys Boulevard—and the Westside—at the Metro D Line—including refined maintenance and storage strategy.
- C. AUTHORIZING advancement of the Final EIR and any additional environmental documentation required as a result of selecting the LPA and development of an IOS.

Overview of Alternatives



	Alt 1 *	Alt 3	Alt 4	Alt 5	Alt 6
Technology	Automated Monorail	Automated Monorail	Automated Heavy Rail	Automated Heavy Rail	Driver-Operated Heavy Rail
Alignment	Aerial	Aerial/Underground	Aerial (n. of Valley Vista/Underground	Aerial (n. of Raymer)/Underground	Underground
Length (miles)	15.1	16.1	13.9	13.8	12.9
Stations	8	9	8	8	7
End-to-end travel time (mins.)	~28	~33	~20	~20	~18
Peak train frequency (mins.)	2.77	2.77	2.5	2.5	4
Daily Ridership	~63,000	~82,000	~123,000	~124,000	~107,000
Connection to UCLA	Electric Bus	Station under campus	Station under campus	Station under campus	Station under campus
Daily VMT Reduction (2045)	~342,000	~451,000	~768,000	~775,000	~695,000
Residential Acquisitions	1	1	212	34	127
Capital Cost (2023\$)	\$15.4B	\$20.8B	\$20.0B	\$24.2B	\$24.4B

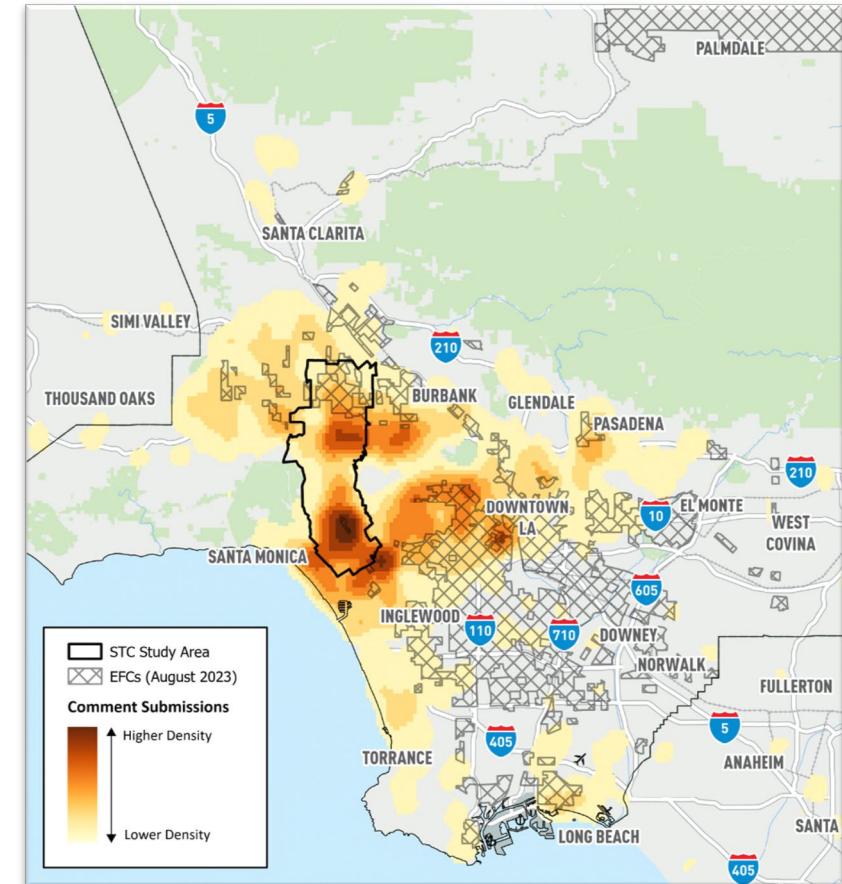
*Alternative 1 also includes an E-bus between the Metro D Line Westwood/VA Hospital Station and UCLA Gateway Plaza.

Comparison of Alternatives Studied

Alt	Opportunities	Challenges
1	<ul style="list-style-type: none"> Lowest capital cost (\$15.4B), 37% less than the highest cost alternative Fewest Significant and Unavoidable CEQA impacts (DEIR Environmentally Superior Alternative) 	<ul style="list-style-type: none"> Lowest ridership, ~1/2 ridership of the highest ridership alt No direct rail connection to UCLA ~1/2 employment within ½ mile of stations than other alternatives Lowest FTA cost-effectiveness Lowest GHG and VMT reduction
3	<ul style="list-style-type: none"> Only alternative that provides service to both UCLA and the Getty Center 	<ul style="list-style-type: none"> Longest end-to-end travel time (~33 minutes) Slightly higher capital cost than Alt 4 (<4% difference) with 2/3 of the ridership (anticipate higher potential for VE)
4	<ul style="list-style-type: none"> Lower cost than Alternative 5 (~\$4.2B, 17%) with similar mobility benefits Highest cost-effectiveness 	<ul style="list-style-type: none"> Community concerns about aerial structure along Sepulveda Blvd Highest number of residential acquisitions (212 units, 202 in multifamily residential)
5	<ul style="list-style-type: none"> Highest ridership Fewest residential acquisitions among HRT alternatives 	<ul style="list-style-type: none"> Higher cost than Alternative 4 (~\$4.2B, 17%) with similar mobility benefits
6	<ul style="list-style-type: none"> Fastest end-to-end travel time (~18 minutes) Shortest alignment 	<ul style="list-style-type: none"> Most expensive Less frequent headways Mid-tunnel vent shaft on LADWP Stone Canyon Reservoir parcel Second most residential acquisitions (127 multifamily units) Fewest number of stations

Draft EIR Outreach and Summary of Comments

- > 90-day public comment period: June 2 – August 30, 2025
- > 5 Community Meetings and 5 Public Hearings held during comment period to provide information and obtain comments
- > 8,074 total comment submissions
- > Of the total submissions, 7,308 submissions (90.5%) expressed some type of support for the project, either for specific alternative(s) or overall project
- > Only 69 submissions (0.9%) expressed opposition to the overall project



Cost Benefit Analysis

- > At the July 2025 Metro Board meeting, **the Board approved a methodology framework** for a Cost Benefit Analysis to be conducted on Metro capital projects at key milestones to support investment and funding decisions.
- > Two components inform the CBAs:
 - **Weighted Benefits Analysis**
 - Points-based evaluation comparing benefits across the five goals in the Metro-adopted CBA methodology.
 - Each benefit is assigned a **score of 1 (lowest) through 7 (highest)**.
 - Alternative 5 performs the strongest
 - **Benefit Cost Ratio**
 - Benefit Cost Ratio compares monetized project benefits to monetized project costs.
 - **All alternatives confer significant benefits compared to costs.**
 - **Alternative 4** has the highest monetized benefits compared to costs.
- > *Note: Cost Benefit Analysis results cannot be used for comparison between projects due to different assumptions for each analysis.*

	Alt 1	Alt 3	Alt 4	Alt 5	Alt 6
Weighted Benefits Analysis	4.8	5.3	6.0	6.1 	5.7
Benefit Cost Ratio	4.2	3.5	5.4 	4.6	4.3

Staff Recommendation: Modified Alternative 5 Description



Elements of Modified Alternative 5

- Construction and operational approach of Alternative 5
- Northern segment along Van Nuys Boulevard (similar to Alternative 6)
- Southern segment with station on campus at UCLA and along Sepulveda Boulevard
- Initial Operating Segment (IOS) to focus on connecting G Line and East San Fernando Valley Light Rail in the San Fernando Valley with the D Line on the Westside
- Need to identify maintenance and storage approach to support IOS
- Refined alignment through Santa Monica Mountains

Staff Recommendation: Modified Alternative 5 and IOS Benefits

Draft EIR Goals	LPA and IOS Staff Recommendation Benefits
Improve Mobility	<ul style="list-style-type: none">- Alternative 5 is highest ridership alternative- Alternative 5 travel time among fastest and anticipated to improve with LPA due to shorter more direct route than Alternative 6 (fastest Draft EIR alternative)- IOS provides alternative to congested 405 through the Sepulveda Pass
Improve Accessibility and Promote Equity	<ul style="list-style-type: none">- Direct connections to Metro D, E, G and ESFV Lines and Metrolink Ventura County Line- IOS provides direct connections to Metro D, G and ESFV Lines
Support Community and Economic Development	<ul style="list-style-type: none">- Stations close to major destinations and employment centers, including UCLA
Protect Environmental Resources and Support Sustainable Transportation System	<ul style="list-style-type: none">- Alternative 5 has greatest VMT reduction- No construction and ventilation shaft in Santa Monica Mountains
Provide a Cost-Effective Solution and Minimize Risk	<ul style="list-style-type: none">- Phasing allows for project's mobility benefits to be delivered earlier, as funding is available, and incrementally- Addresses key stakeholder comments- Shorter alignment and fewer stations with LPA should reduce Alternative 5 costs
Enhance Resiliency	<ul style="list-style-type: none">- Providing a new travel corridor through the Sepulveda Pass adds resiliency to the transportation network.