

Environmental Assessment

EASTSIDE TRANSIT CORRIDOR PHASE 2



Los Angeles County Metropolitan Transportation Authority

Eastside Transit Corridor Phase 2

In Los Angeles County

ENVIRONMENTAL ASSESSMENT

Pursuant to
National Environmental Policy Act (42 United States Code Section 4332),
49 United States Code Chapter 53, 16 United States Code Section 470,
23 Code of Federal Regulations Part 771, and 23 Code of Federal Regulations Part 450;
and by the
UNITED STATES DEPARTMENT OF TRANSPORTATION
FEDERAL TRANSIT ADMINISTRATION
and
LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY

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EXECUTIVE SUMMARY

ES-1 Introduction

The Federal Transit Administration (FTA), in coordination with the Los Angeles County Metropolitan Transportation Authority (LACMTA or Metro) has prepared this Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) for the Eastside Transit Corridor Phase 2 (Project). The Project includes the Build Alternative and the No Build Alternative and is described in detail in **Chapter 2.0** (Description of Alternatives) and **Appendix E** (Alternatives Considered and Project Description).

Metro proposes to extend the Metro E Line east from the current terminus at Atlantic Station to an at-grade terminal station at the Greenwood station in the City of Montebello. The Build Alternative includes the following key features:

- Approximately 4.7 miles of reconfigured and new light rail transit guideway
- One reconfigured and three new stations
- Facilities to support rail operations constructed near the alignment (e.g., traction power substation, train control houses, radio communications)
- A modification to existing tracks west of the proposed alignment extension (Maravilla Crossover)
- One maintenance and storage facility (MSF)

Relying upon the requirements under NEPA, as revised by the Building United States Infrastructure through Limited Delays and Efficient Reviews Act of 2023, and 23 Code of Federal Regulations (CFR) Part 771, effective July 3, 2025, this EA analyzes reasonably foreseeable effects that result from the Project. As discussed in **Chapter 3.0** (Affected Environment and Environmental Consequences), reasonably foreseeable effects are those effects that have a rational link to the Project in terms of geographic and temporal proximity, and must be sufficiently likely to occur. Reasonably foreseeable effects do not include effects that are speculative in nature or causally attenuated from the Project.

Unless otherwise defined in the resource-specific section of the EA, for the purposes of assessing reasonably foreseeable effects, the following parameters apply:

- Geographic proximity includes effects as described in **Section 3.1.1** of this EA. The Study Area extends 0.5 to 2 miles from the centerline of the Build Alternative's guideway; it encompasses the Cities of Commerce and Montebello, the community of East Los Angeles in unincorporated Los Angeles County, and a small portion of Monterey Park to the northwest. For some environmental resource topics, specialized study areas are geographical boundaries designed to analyze a specific environmental, social, or technical impact. **Appendix S** (Regulatory Setting Summary) summarizes federal, state, and local regulations for the individual environmental resource.
- The temporal scope for long-term effects is between 2025 (the year the EA for the Project was started) and 2050 (the horizon year for planned regional projects in operation). Temporary effects are expected to occur during Project construction and are described in **Section 3.17** (Construction). Project construction is anticipated to last approximately 60 to 84 months.
- Sufficiently likely to occur includes effects associated with other projects for which funding has been committed, including, for example, projects included in the fiscally-constrained list of projects in the Regional Transportation Plan with dedicated funding for construction.

Under NEPA, a proposed project is an activity that is subject to a federal action. This Project is subject to federal and state environmental review requirements pursuant to NEPA and California Environmental Quality Act (CEQA). FTA is the lead agency for NEPA, as Metro plans to seek federal funding for the Project from FTA. Metro is the lead agency under CEQA.

ES-1.1 Project Background

Since 2007, Metro has implemented a comprehensive outreach program and alternative selection process for the Project, including extensive public outreach comprised of community meetings, workshops, open houses, and public hearings throughout each phase of environmental review. Additional details on the Project background, alternative screening and selection process, and environmental review process are provided in **Chapter 2.0** and **Appendix E**, of this EA. The outreach efforts are described in more detail in **Chapter 5.0** (Public Involvement) and **Appendix Q** (Public Outreach Report).

ES-2 Purpose and Need

The purpose of the Project is to reduce travel times for communities in eastern Los Angeles County and provide new multimodal connections to destinations within the greater Southern California region. By serving highly concentrated areas of employment, activity centers, and residential communities, the Project would expand economic opportunities and promote the growth of local economies, while supporting transit oriented community goals and addressing the travel needs of transit dependent populations. It would enhance regional connectivity by providing new and faster multimodal options and lead to economic development and infill growth opportunities throughout eastern Los Angeles County.

The Build Alternative addresses the transportation needs of eastern Los Angeles County communities which face high population and employment growth and constrained transportation facilities. Future population and employment growth will contribute to increases in travel demand which, if unaddressed, will overwhelm existing and future transportation networks, impact goods movement, and exceed transit capacities in eastern Los Angeles County. The Build Alternative is needed to address growing population and employment densities, congestion impacts on bus transit and vehicle travel, quality of life, and high transit demand within the Study Area. See **Chapter 1.0** of this EA for additional information.

ES-3 Alternatives

ES-3.1 No Build Alternative

The No Build Alternative evaluates the reasonably foreseeable effects within the Study Area if the Build Alternative is not approved. The No Build Alternative would maintain existing transit service through the year 2050. No new transportation infrastructure would be built within Los Angeles aside from projects currently under construction or funded for construction and operation by 2050 via the 2008 Measure R or 2016 Measure M sales taxes. The No Build Alternative would include existing transit and roadway projects from the base year (2025) and planned transit projects currently under construction or funded for construction that would be in operation by the horizon year (2050). The No Build Alternative is used for comparison purposes to assess the relative benefits and effects of constructing a new transit project in the Study Area versus implementing only currently planned and funded projects that serve the greater Los Angeles County region. The No Build Alternative evaluates the reasonably foreseeable effects that would be expected to occur within the Project's geographic proximity and temporal scope described in **Section ES-1** and **Chapter 3.0** if the Build Alternative were not implemented. The No Build Alternative is required for comparison under NEPA.

The No Build Alternative would not provide a rail transit option for communities in eastern Los Angeles County and, therefore, would not satisfy the purpose of the Build Alternative. The No Build Alternative would not address growing population and employment densities, local and arterial roadway congestion, quality of life issues, or high transit demand in the Study Area; therefore, the No Build Alternative would not satisfy the Build Alternative's need.

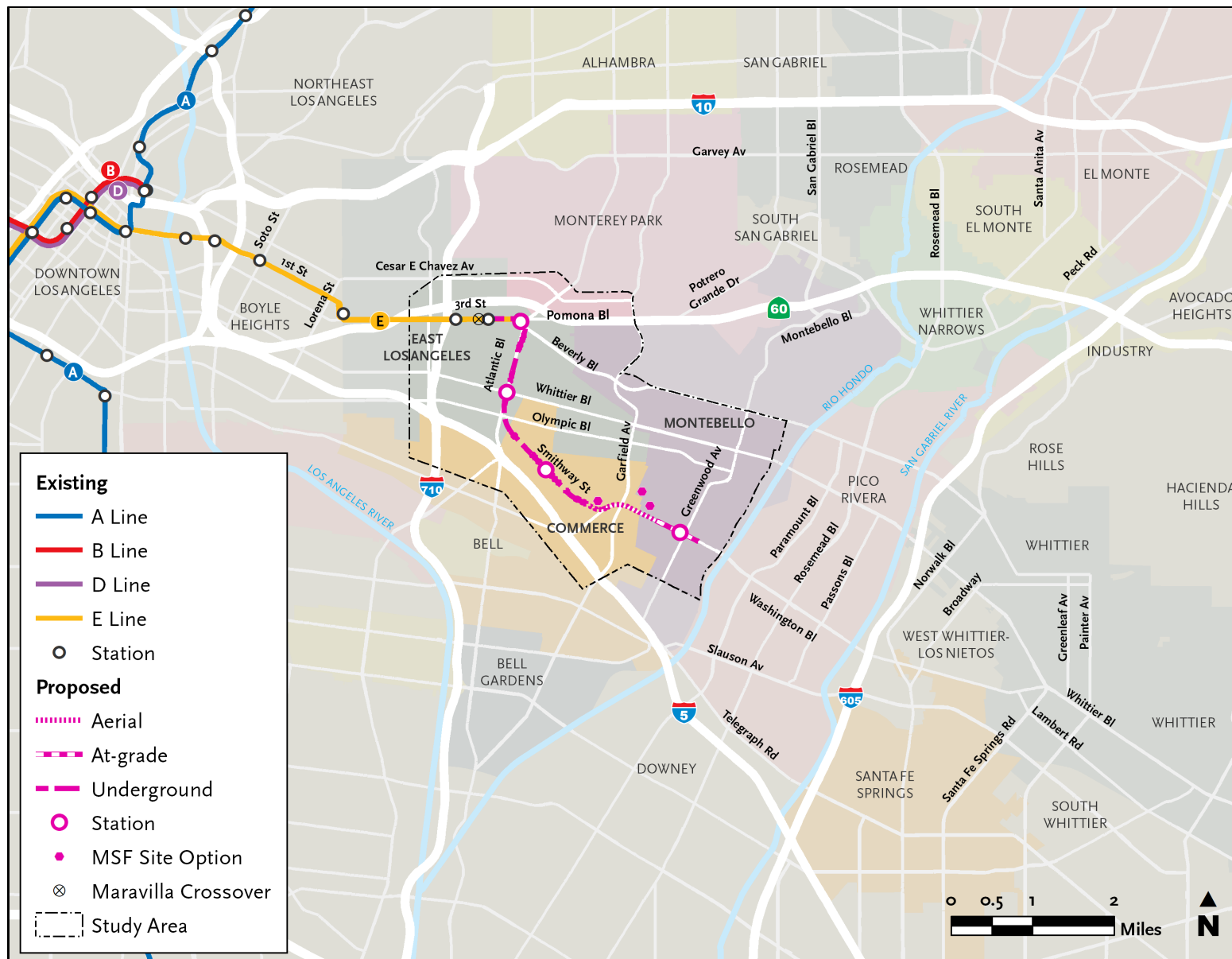
ES-3.2 Build Alternative

The Build Alternative is an electric-powered light rail transit service extension in eastern Los Angeles County. It would include approximately 4.7 miles of reconfigured and new light rail transit guideway, extending the Metro E Line east from its current terminus at Atlantic Boulevard to an at-grade terminal station at the proposed Greenwood station in the City of Montebello. The 4.7 mile alignment would include the reconfiguration of 0.4 mile of existing track to transition to a new 4.3 mile extension. This alternative would have approximately 3.1 miles of underground alignment, 0.9 miles of aerial alignment, and 0.7 miles of at-grade alignment; a relocated underground Atlantic/Pomona station; and three new stations. The Build Alternative would also include facilities to support vehicle operations, such as overhead catenary systems, radio communications, and train control houses that would be constructed along the alignment; a modification to existing tracks west of the proposed alignment extension (Maravilla Crossover); and one MSF. The MSF would either be located in the City of Montebello (MSF Site 1 or 2) or in the City of Commerce (MSF Site 3), as shown in **Figure ES.1**.

The Build Alternative would construct a light rail transit option for communities in eastern Los Angeles County, enhancing regional connectivity, improving mobility and increasing travel efficiencies, supporting transit dependent populations, promoting local economic growth, and serving high-density urban areas. The Build Alternative satisfies the purpose and need of the Eastside Transit Corridor Phase 2 Project because it would expand transit opportunities in eastern Los Angeles County, provide a transportation alternative to local and arterial roadways during periods of congestion, improve quality of life by enhancing mobility and access options, and serve a population with high transit demand.

ES-4 Summary of Environmental Consequences and Mitigation Measures

Table ES.1 provides a summary of the Build Alternative's reasonably foreseeable environmental effects and the NEPA project measures (NPM) and/or NEPA mitigation measures (NMM) that would be implemented to address the Build Alternative's reasonably foreseeable permanent and temporary effects on the environment. NPMs and NMMs are identified for various resources. NPMs are incorporated as part of the Build Alternative to avoid or minimize potential adverse effects and consist of design features, best management practices, and measures required by law, including permit approvals. NMMs are additional actions, not otherwise part of the Build Alternative, that are designed to minimize, reduce, or compensate for reasonably foreseeable adverse effects. **Chapter 3.0** of the EA provides more detailed information and analysis about the Build Alternative's reasonably foreseeable environmental effects. **Appendix D** (Environmental Commitments Record) is a record of all NPMs and NMMs.



Source: Metro; CDM Smith/AECOM JV 2026.

Figure ES.1 Study Area

Table ES.1 Summary of Environmental Effects

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Air Quality	Long-Term: The Build Alternative would be consistent with transportation plans and programs. There would be no potential for operation of the Build Alternative to generate a carbon monoxide or particulate matter hotspot. Emissions of all relevant criteria pollutants and precursors, except for volatile organic compounds, would be reduced as a result of the Build Alternative. The increase in volatile organic compounds would not exceed South Coast Air Quality Management District's regional emissions threshold levels (see Appendix F [Air Quality Impacts Report]) and there would be no potential for operational emissions to violate air quality standards. The Build Alternative would decrease vehicle miles traveled (VMT) compared to existing conditions, resulting in long-term benefits on air quality. Short-Term/Construction: Emissions during construction would be temporary and would not exceed the South Coast Air Quality Management District's regional construction emissions thresholds or localized significance thresholds. Construction would not be expected to result in emissions in any one location for 5 years or more; thus, construction emissions would not be expected to meaningfully affect long-term ambient concentrations and no quantitative particulate matter hot spots analysis is required. No adverse effect would occur. On March 24, 2026, the Transportation Conformity Working Group reviewed and determined that the Build Alternative is not a Project of Air Quality Concern and would not have adverse impacts on air quality. The Build Alternative meets the requirements of the Clean Air Act and 40 CFR 93.116.	Long-Term and Short-Term/Construction: No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction or operational effects on this resource.	Long-Term and Short-Term/Construction: No Adverse Effect
Biological Resources (Migratory Birds)	Long-Term: Disturbing vegetation during the bird nesting season could disrupt migratory bird nesting activities. However, long-term vegetation disturbance would primarily be from maintenance tree trimming, which is expected to be minimal. Additionally, the Build Alternative would comply with the Migratory Bird Treaty Act, which protects against the take of migratory birds. Therefore, there would be no long-term adverse effect on migratory birds. Short-Term/Construction: Street trees and landscape vegetation could be affected by construction and maintenance activities during the 3-year tree establishment period. If vegetation disturbance occurs during the bird nesting season, it could adversely affect migratory birds by disrupting nesting activities. The Build Alternative would comply with the Migratory Bird Treaty Act, Metro's tree policy, and tree protection policies of the corridor jurisdictions, which include provisions for tree protection and replanting during construction. Implementation of NMM BIO-1, which requires nesting bird surveys and avoidance of active nests during the bird nesting season, would reduce adverse effects on migratory birds during the construction and tree establishment period.	Long-Term: No Adverse Effect Short-Term/Construction: Adverse Effect	Long-Term: None Short-Term/Construction: NMM BIO-1 - Nesting Birds	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Biological Resources (Vegetation)	Long-Term: Vegetation communities do not exist within the Biological Resources Study Area. Any tree-related maintenance activities would comply with the Metro Tree Policy and local tree protection policies. Thus, vegetation would not be affected by long-term maintenance activities. Short-Term/Construction: Street trees and landscape vegetation could be affected by construction activities; however, Metro would comply with its tree policy and local tree protection policies, which include provisions for tree protection and replanting during construction, and care of planted trees during the 3-year tree establishment period.	Long-Term and Short-Term/Construction: No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction or operational effects on this resource.	Long-Term and Short-Term/Construction: No Adverse Effect
Biological Resources (Invasive Species and Pathogens)	Long-Term and Short-Term/Construction: Equipment for construction and maintenance activities has the potential to transport invasive plant seeds in areas of exposed soil and spread tree disease pathogens. The Biological Resources Study Area is primarily built out with minimal landscaping, isolated street trees, and no vegetation communities. Thus, there would be limited potential to spread invasive species and tree disease pathogens.	Long-Term and Short-Term/Construction: No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction or operational effects on this resource.	Long-Term and Short-Term/Construction: No Adverse Effect
Community Impacts (Neighborhood Continuity)	Long-Term: The Build Alternative would not result in adverse effects neighborhood continuity. The Build Alternative would provide benefits that would strengthen neighborhood continuity. Development of Metro-owned properties would be required to adhere to the Metro Joint Development and Transit Oriented Communities Policy as described in and set forth in NPM EFI-1. Metro would ensure these developments would be evaluated for possible affordable housing development or other transit supportive land use and align with housing and economic goals through standards planning reviews. Therefore, operation would not result in adverse effects. Short-Term/Construction: Traffic could potentially result in traffic delays near construction staging areas. Street closures would potentially physically divide established communities. However, street closures would be periodic and temporary. Construction best management practices as set forth in NPM TRA-2 would minimize these short-term disruptions to traffic and street closure disruption during construction. As set forth in NPM TRA-4, site access during construction to MSF Site 1, 2, or 3 and adjacent properties would be maintained and meet design requirements. However, there would be an adverse effect due to reduced access within communities, which could lower quality of life and increase isolation. These adverse effects would be reduced to not adverse with implementation of NMM TRA-2, which would require that access to important community facilities and neighborhood areas are maintained. Construction of the Build Alternative and MSF would result in temporary employment opportunities. However, construction workers would likely be sourced from the existing local labor pool and construction of the Build Alternative and MSF would not require construction of new housing to house workers. Construction-related air quality emissions would not exceed South Coast Air Quality Management	Long-Term: No Adverse Effect Short-Term/Construction: Adverse Effect	Long-Term: NPM EFI-1 - Metro Joint Development Program and Metro Pilot Local Hiring Initiative Short-Term/Construction: NPM NOI-2 - Construction Noise and Vibration Control NPM TRA-2 - Construction Best Management Practices for Transportation NPM TRA-4 - Construction Best Management Practices for the Maintenance and Storage Facility Regarding Transportation NMM NOI-1 - Construction Noise Plan and Noise Monitoring Plan	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
	District's regional construction emissions threshold levels (see Appendix F). Noise and vibration impacts would be reduced with implementation of measures identified in NPM NOI-2 and adverse effects would be reduced to not adverse with implementation of NMM NOI-1 through NMM NOI-10, NMM NOI-13, and NMM NOI-14 (see Appendix L [Noise and Vibration Impacts Report]).		NMM NOI-2 - Cast-in-Drilled-Hole Construction Methodology NMM NOI-3 - Noise Barriers NMM NOI-4 - Construction Staging Area NMM NOI-5 - Haul Routes NMM NOI-6 - Best Available Control Technologies NMM NOI-7 - Construction Working Hours NMM NOI-8 - Public Notification of Construction Operations and Schedules NMM NOI-9 - Truck Staging NMM NOI-10 - Tunnel Vent Fans Away From Residences NMM NOI-13 - Identify Vibration Susceptible Properties NMM NOI-14 - Vibration Pre-Construction Survey and Control Plan NMM TRA-2 - Traffic Management Plan	

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Community Impacts (Physical Character)	Long-Term: The Build Alternative would not result in adverse effects on physical character. The underground alignment would not change the physical character of surrounding surface land uses. The aerial alignment would be visually congruent with surrounding industrial and commercial land uses. The at-grade alignment and facilities would comply with the Systemwide Station Design Standards and integrate with the existing character of the surrounding land uses. The Build Alternative would require acquisition of commercial and industrial properties. Metro would provide relocation services and payments per the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, and access to these properties at a new location would be maintained in the long term. Short-Term/Construction: Potential street closures could potentially physically divide established communities. However, street closures would be periodic and temporary. NPM TRA-2 would be implemented to minimize street closure disruption during construction. As required by NPM TRA-4, site access to MSF Site 1 and adjacent properties would be maintained and meet design requirements. However, there would be an adverse effect due to street closures potentially physically dividing established communities. These adverse effects would be reduced to not adverse with implementation of NMM TRA-2, which would minimize street closure disruptions during construction and maintain access within and between established communities.	Long-Term: No Adverse Effect Short-Term /Construction: Adverse Effect	Long-Term: None Short-Term/Construction: NPM TRA-2 - Construction Best Management Practices for Transportation NPM TRA-4 - Construction Best Management Practices for the Maintenance and Storage Facility Regarding Transportation NMM TRA-2 - Traffic Management Plan	Long-Term: No Adverse Effect Short-Term /Construction: No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Community Impacts (Access and Mobility)	Long-Term: The Build Alternative is anticipated to alter public access and mobility within and between communities and neighborhoods. The open trench on 3rd Street, and aerial and at-grade alignments, including the tail tracks ending at Montebello Boulevard, would eliminate left-turns and crossings at unsignalized intersections. Impacts would be reduced through the implementation of NPM TRA-1, which would implement best practice safety measures such as curbs, barriers, and signage crossings. As required by NPM TRA-3, site access during operations to MSF Site 1, 2, or 3 and adjacent properties would be maintained and meet design requirements. However, an adverse effect on access and mobility would still occur at the intersection of Garfield Avenue and Washington Boulevard because a reduction in travel lanes would result in an unacceptable level of service. Implementation of NMM TRA-1, which would install a new left turn lane and reconfigured right turn lane at this intersection, would reduce adverse effects to not adverse. Benefits of the Build Alternative include improved transit access, reduced automobile reliance and congestion, increased bicycle and pedestrian access, and enhanced mobility within and between communities overall. The Build Alternative would improve transit mobility in the Study Area by reducing transit travel times and improving connectivity between eastern Los Angeles County communities and the greater Southern California region. Short-Term/Construction: Temporary and periodic street and sidewalk closures could be required during construction activities. As identified in NPM TRA-2, lane and/or road closures would be scheduled to minimize disruptions to circulation patterns. As required by NPM TRA-4, site access during construction to MSF Site 1 or 2 and adjacent properties would be maintained and meet design requirements and alternative routes would be available for any streets requiring closure. However, there would be an adverse effect due to street closures impacting access and mobility within and between communities. As required by NMM TRA-2, the Traffic Management Plan specifies measures to minimize disruption to access and mobility during construction and would require that access to important community facilities and neighborhood areas is maintained. Therefore, with implementation of NMM TRA-2, construction adverse effects associated with street closures would be reduced to not adverse.	Long-Term: Adverse Effect Short-Term/Construction: Adverse Effect	Long-Term: NPM TRA-1 - Operational Best Management Practices for Transportation NPM TRA-3 - Operational Best Management Practices for the Maintenance and Storage Facility Regarding Transportation NMM TRA-1 - Garfield Avenue and Washington Boulevard Intersection Short-Term/Construction: NPM TRA-2 - Construction Best Management Practices for Transportation NPM TRA-4 - Construction Best Management Practices for the Maintenance and Storage Facility Regarding Transportation NMM TRA-2 - Traffic Management Plan	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Community Impacts (Parks)	Long-Term: The Build Alternative would not result in adverse effects on parks. Operation of the Build Alternative would not require any physical acquisition, displacement, alteration, or relocation of parks within the Community Facilities and Public Services Study Area. Under the Build Alternative, the existing at-grade guideway would transition to the underground guideway within a trench along 3rd Street. This could potentially impact access to Belvedere Park Lake. However, U-turns would be allowed at Mednick Avenue and Woods Avenue. Additionally, a new high-visibility crosswalk would be constructed across 3rd Street to Belvedere Park Lake and other facilities. Left turns would be eliminated to and from Civic Center Way; however, the pedestrian crossing would be maintained. Short-Term/Construction: Intermittent increases in noise, dust, odors, and traffic delays could occur, which could affect adjacent parks. However, these impacts would not be adverse with implementation of standard control and noise and vibration mitigation measures. Implementation of NPM TRA-2 would minimize disruptions to the public caused by temporary closures. However, there would be an adverse effect due to intermittent closures and detours during construction, which could inhibit access to parks. Implementation of NMM TRA-2 would maintain mobility and access to local facilities and adverse effects associated with closures and detours would be reduced to not adverse.	Long-Term: No Adverse Effect Short-Term/Construction: Adverse Effect	Long-Term: None Short-Term/Construction: NPM TRA-2 - Construction Best Management Practices for Transportation NMM TRA-2 - Traffic Management Plan	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect
Community Impacts (Multi-Use Trails)	Long-Term: The Build Alternative would not result in adverse effects on multi-use trails as there are none within the Community Facilities and Public Services Study Area. Short-Term/Construction: Traffic could potentially delay access to the multi-use trails located east of the Study Area from Washington Boulevard. As identified in NPM TRA-2, Metro standard practices shall include timing closures to minimize disruptions to the public. With implementation of NMM TRA-2, the Build Alternative would require development of a Traffic Management Plan to maintain mobility and access to local facilities, and construction adverse effects associated with closures and detours would be reduced to not adverse.	Long-Term: No Adverse Effect Short-Term/Construction: Adverse Effect	Long-Term: None Short-Term/Construction: NPM TRA-2 - Construction Best Management Practices for Transportation NMM TRA-2 - Traffic Management Plan	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Community Impacts (Other Community Facilities)	Long-Term: The Build Alternative would not result in adverse effects on other community facilities. Operation of the Build Alternative would not require any physical acquisition, displacement, alteration, or relocation of fire, police, emergency service, or school facilities. The trench guideway along 3rd Street could potentially impact access to and from the East Los Angeles Civic Center and Library. Left turns would be eliminated to and from Civic Center Way; however, the pedestrian crossing would be maintained. Additionally, vehicle access to the Civic Center from Mednick Avenue and U-turns at Mednick Avenue and Woods Avenue would be available. A new high-visibility crosswalk east of La Verne Avenue would be constructed to provide pedestrian access across 3rd Street. Short-Term/Construction: Traffic could potentially result in traffic delays and thus hinder access to other community facilities. As identified in NPM TRA-2, Metro standard practices would include timing closures to minimize disruptions to the public. For construction of the MSF, access to nearby properties and alternative routes would be available for any streets requiring closures as set forth in NPM TRA-4. However, there would be an adverse effect due to street closures inhibiting access to other community facilities. With implementation of NMM TRA-2, the Build Alternative would require development of a Traffic Management Plan to maintain mobility and access to local facilities, and construction adverse effects associated with closures and detours would be reduced to not adverse.	Long-Term: No Adverse Effect Short-Term/Construction: Adverse Effect	Long-Term: None Short-Term/Construction: NPM TRA-2 - Construction Best Management Practices for Transportation NPM TRA-4 - Construction Best Management Practices for the Maintenance and Storage Facility Regarding Transportation NMM TRA-2 - Traffic Management Plan	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect
Historic, Archeological, and Tribal Resources (Historic Properties)	Long-Term: Maximum vibration levels at historic properties along the Build Alternative are predicted to be 68 vibration decibels. Due to the strategic location of switches, none of the vibration levels at historic properties are predicted to exceed the FTA frequent impact criteria along the Build Alternative. Construction of the Build Alternative would acquire and demolish six contributors to the Vail Field Industrial Addition historic district, which could result in a long-term effect on the historic district. However, none of these contributors are individually eligible historic properties. The six contributors are located near the center and on the periphery of the historic district, though their demolition would not alter the district's character defining features. The core would remain intact with enough contributors with characteristics to convey its historical significance. The Build Alternative would not diminish the integrity of the historic properties' character defining features. As a result, there would be no adverse effect on historic properties from visual changes. Short-Term/Construction: Construction activities would not physically destroy, damage, alter, or move historic properties. The physical features within each property's setting that contribute to its historic significance would not change. New visual elements of the Build Alternative construction would be congruent with the surrounding industrial setting and would not diminish features of the historic properties. Effects on specific properties are summarized below.	Long-Term: No Adverse Effect Short-Term/Construction: Adverse Effect	Long-Term: None Short-Term/Construction: NMM CUL-1 - Protection Measures – Differential Settlement/Vibration/Tunnel Boring Machine [TBM] Specifications for CVS Pharmacy [CVS]/Golden Gate Theater	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
	<u>National Chicano Moratorium March</u>: Construction would remove and replace the asphalt pavement along portions of the historic district's contributing march route. A trench would be installed within the existing right-of-way at 3rd Street and La Verne Avenue. The Build Alternative would not result in the reconfiguration of the streets and sidewalks and the streets and sidewalk would continue to be constructed with asphalt and concrete. None of the district's character-defining features or contributing elements would be demolished or altered. Therefore, the Build Alternative would have no adverse effect on the National Chicano Moratorium March route. <u>Golden Gate Theater</u>: Construction of the guideway and station has the potential to cause vibrations and ground settlement that could impact the Golden Gate Theater, resulting in an adverse effect. Implementation of NMM CUL-1 would require building protection measures to be put in place, as identified in a pre-construction survey. NMM CUL-1 would reduce the potential for vibration-related adverse effects generated during construction activities to damage the Golden Gate Theater and there would be no adverse effect. <u>Vail Field Industrial Addition Historic District</u>: Demolition of six contributors to the historic district would occur during construction. This would not alter the district's character defining features and the core of the historic district would have characteristics to convey its historical significance. Therefore, the Build Alternative would have no adverse effect on the Vail Field Industrial Addition historic district. <u>Pacific Metals Company Building</u>: The construction of the Build Alternative would introduce a new visual element but would not change the historic character of the building. The aerial guideway, while conspicuous, would be congruent with other railway infrastructure in the area. The Build Alternative would have no adverse effect on Pacific Metals Company building. <u>MSF Site 2</u>: The aerial guideway would be within the parking lot of the Pacific Metals Company building but would not alter the building's façade or diminish the integrity of the building's significant design features. The E.F. Hauserman Company building would be within the vicinity of MSF Site 2. MSF Site 2 would introduce a new visual element but would not change the historic character of the building. Construction activities would not materially impair the historic property due to the distance from MSF Site 2 and its tail tracks. MSF Site 2 would have no adverse effect on historic properties. <u>MSF Site 3</u>: MSF Site 3 would be located within the Vail Field historic district. Construction of the MSF would introduce a new visual element but the visual quality and character of the site would be consistent with the industrial nature of the historic district and would not have an adverse effect.			

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Historic, Archeological, and Tribal Resources (Archaeological Resources)	Long-Term: The Build Alternative would not physically demolish, destroy, relocate, or alter any known archaeological resources that are historic properties. Short-Term/Construction: The Build Alternative would have no effect on known archaeological resources within the Area of Potential Effects. However, construction could have the potential to disturb and destroy archaeological resources that are currently unknown. NMM CUL-2 requires that construction workers receive training on how to proceed if cultural resources are inadvertently discovered and that a Cultural Resources Monitoring and Mitigation Plan be prepared for unanticipated discoveries. Implementation of this mitigation would reduce adverse effects on archaeological resources to not adverse.	Long-Term: No Adverse Effect Short-Term/Construction: Adverse Effect	Long-Term: None Short-Term/Construction: NMM CUL-2 - Unknown Archaeological Resources	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect
Historic, Archeological, and Tribal Resources (Traditional Cultural Properties)	Long-Term: The Build Alternative would not require additional ground disturbance or other activities that could adversely affect Traditional Cultural Places. Short-Term/Construction: No precontact archaeological sites were identified through research, survey, and Native American consultation in the Area of Potential Effects; therefore, precise locations with a higher potential to contain such resources cannot be identified. If unmitigated, there could be a potential disturbance of Traditional Cultural Places that are currently unknown during construction, resulting in an adverse effect. Implementation of NMM TCP-1, NMM TCP-2, and NMM TCP-3 would ensure that workers have a clear understanding of Traditional Cultural Places that may be present in the construction area, and that procedures and plans would be in place for monitoring for and for safely handling Traditional Cultural Places. Implementation of NMM TCP-1 through NMM TCP-3 would reduce adverse effects to not adverse.	Long-Term: No Adverse Effect Short-Term/Construction: Adverse Effect	Long-Term: None Short-Term/Construction: NMM TCP-1 - Traditional Cultural Places [TCP] Training NMM TCP-2 - Retain a Native American Monitor NMM TCP-3 - Unknown Traditional Cultural Places [TCP]	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Economic Impacts	Long-Term: Build Alternative-related spending would provide economic benefits by generating additional wages and salaries for households and creating jobs for the Southern California region. Wages and benefits from operation of the Build Alternative would be greater for the metro area relative to the County. The Build Alternative would result in travel time savings and travel cost savings. The Build Alternative would save travelers' travel time and attract additional riders relative to the No Build Alternative. The Build Alternative is expected to lead to new development and/or redevelopment of land surrounding some of the proposed stations, which would likely have the effect of increasing property tax revenues for affected local jurisdictions (i.e., Los Angeles County, City of Montebello and City of Commerce). Development of Metro-owned properties would be required to adhere to the Metro Joint Development Program and Metro Pilot Local Hiring Initiative as required by NPM EFI-1. While the Build Alternative would result in minor losses in the tax base and associated revenue, these effects would not be adverse. Moreover, the loss of tax revenue could potentially be offset by increased development near stations and along the Build Alternative alignment, which creates economic opportunity. Therefore, there would be no adverse effect. Short-Term/Construction: Build Alternative-related construction spending would provide regional economic benefits by generating additional wages and salaries for households and creating jobs for the region. General construction and soft costs/professional services expenditures and external funding sources would generate investment in the local economy and local employment. Construction of the Build Alternative would be required to adhere to the Metro Joint Development Program and Metro Pilot Local Hiring Initiative as required by NPM EFI-1. Construction could have temporary adverse economic effects on some commercial and industrial businesses, particularly near or adjacent to construction sites, including traffic disruption and air quality and noise effects. These construction effects could in turn result in a loss of sales and/or increased operating costs for commercial businesses. These businesses represent a relatively small portion of the overall economy. Therefore, there would be no adverse effect on the region.	Long-Term and Short-Term/Construction: No Adverse Effect	Long-Term and Short-Term/Construction: NPM EFI-1 - Metro Joint Development Program and Metro Pilot Local Hiring Initiative	Long-Term: Beneficial Effect Short-Term/Construction: No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Geology, Seismic, Soils, and Paleontological Resources (Exposure to Seismic Hazards)	Long-Term and Short-Term/Construction: The Build Alternative is not on any known active faults capable of surface rupture, and is on generally flat, stable soils with low liquefaction potential. Because the Build Alternative is located in a seismically active area, there is potential for seismic ground shaking. To address potential seismic hazards, the Build Alternative would be constructed in compliance with the Metro Rail Design Criteria, applicable building codes, and standards as identified in NPM GEO-1. Compliance includes detailed requirements for planning and conducting a geotechnical investigation, geotechnical design methodologies, and reporting, such as the preliminary geotechnical investigation conducted in 2025. Specific structural engineering recommendations identified in the geotechnical investigations would be incorporated into the final design plans (NPM GEO-1). Thus, there would be no adverse effect.	Long-Term and Short-Term/Construction: No Adverse Effect	Long-Term and Short-Term/Construction: NPM GEO-1 - Geotechnical Investigation	Long-Term and Short-Term/Construction: No Adverse Effect
Geology, Seismic, Soils, and Paleontological Resources (Soil Erosion)	Long-Term: The Build Alternative is located in an urbanized area that is primarily impervious with no exposed soil. There would be no ground disturbance or change in the amount of exposed soil compared to existing conditions. A small increase in impervious surface would not lead to a meaningful change in the amount of runoff and associated erosion. The Build Alternative would comply with post-construction measures in applicable National Pollutant Discharge Elimination System permits and low impact development standards, as identified in NPM HWQ-1. Thus, there would be no adverse effect. Short-Term/Construction: Implementation of erosion control best management practices (BMPs), as identified in NPM HWQ-2, would prevent substantial soil erosion or the loss of topsoil from exposed soils. At the close of construction, areas of exposed soil that were previously paved would be repaved. Thus, there would be no adverse effect.	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect	Long-Term: NPM HWQ-1 - Operational Best Management Practices for Water Resources Short-Term/Construction: NPM HWQ-2 - Construction Best Management Practices for Water Resources	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect
Geology, Seismic, Soils, and Paleontological Resources (Soil Stability)	Long-Term: The Build Alternative could affect and be affected by soil stability including hazards such as landslides, subsidence, liquefaction, or collapse. However, the Build Alternative would undergo a detailed geotechnical investigation and comply with regulatory requirements, as set forth in NPM GEO-1, which would identify and address potential soil stability issues. Thus, there would be no adverse effect. Short-Term/Construction: The Build Alternative would comply with regulatory requirements, as described in NPM GEO-1, and recommendations in a site-specific geotechnical investigation to avoid adverse effects from soil stability, including related to excavation and tunneling and dewatering. Thus, there would be no adverse effect.	Long-Term and Short-Term/Construction: No Adverse Effect	Long-Term and Short-Term/Construction: NPM GEO-1 - Geotechnical Investigation	Long-Term and Short-Term/Construction: No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Geology, Seismic, Soils, and Paleontological Resources (Expansive Soils)	Long-Term: The Build Alternative could affect and be affected by expansive soils, which swell and shrink with moisture changes and have the potential to damage foundations, structures, and underground utilities. However, the Build Alternative would undergo geotechnical investigation and comply with regulatory requirements described in NPM GEO-1. Thus, there would be no adverse effect. Short-Term/Construction: The Build Alternative would comply with regulatory requirements, as described in NPM GEO-1, and recommendations in a site-specific geotechnical investigation to avoid adverse effects from expansive soil. Thus, there would be no adverse effect.	Long-Term and Short-Term/Construction: No Adverse Effect	Long-Term and Short-Term/Construction: NPM GEO-1 - Geotechnical Investigation	Long-Term and Short-Term/Construction: No Adverse Effect
Geology, Seismic, Soils, and Paleontological Resources (Paleontological Resources)	Long-Term: The Build Alternative would not involve any ground disturbance in the long term that could have an adverse effect on paleontological resources. Short-Term/Construction: The Build Alternative is in an area of high sensitivity for paleontological resources, and damage or loss of paleontological resources could occur during tunnel construction from the use of tunnel boring machines, which could likely prevent the discovery of fossil resources. With implementation of NMM GEO-1 through NMM GEO-4, which require inadvertent discovery protocols and fossil recovery measures to help preserve the scientific value of fossils that may be present, potential adverse effects on paleontological resources during construction would be reduced to not adverse.	Long-Term: No Adverse Effect Short-Term/Construction: Adverse Effect	Long-Term: None Short-Term/Construction: NMM GEO-1 - Retaining a Qualified Paleontologist and a Qualified Paleontological Monitor NMM GEO-2 - Ability to Readily Salvage Fossils and Samples of Sediment NMM GEO-3 - Ability to Identify and Permanently Preserve Specimens NMM GEO-4 - Ability to Curate Specimen to a Professional Accredited Museum Repository	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Visual Resources	Long-Term: No scenic vistas are present in the Study Area. Views of surrounding landscapes and topography are available but not considered unique or of visual significance nor substantially affected by the Build Alternative elements. The Build Alternative would mostly operate underground or within the public roadway right-of-way. Certain elements located on properties outside of the public right-of-way (e.g., station plazas, traction power substations) would comply with applicable zoning and design requirements. Operational visual changes would be limited and would not result in adverse effects on visual character, visual resources, visual quality, or viewers. New visual features such as station entries, plazas, and related at-grade facilities would be designed to integrate with the surrounding urban context. Viewer sensitivity ranges from low to moderate due to the existing presence of industrial uses and exposure by residents, park users, and transit riders. However, given the context-sensitive design of the Build Alternative elements, the visual effects of the Build Alternative would not be adverse. Visual effects on historic properties are discussed under Historic, Archeological, and Tribal Resources. Short-Term/Construction: Long-range views would remain largely available from surrounding public locations during construction. Construction activities would result in temporary visual changes associated with building demolition, excavation, construction equipment, staging areas, and temporary surface disturbances. These changes would be most noticeable near locations where existing commercial parcels are acquired and demolished to accommodate new stations, station plazas, surface parking, electrical equipment, or MSF facilities. Although demolition would temporarily alter the visual character of these parcels, such changes would be short term and transitional in nature. Construction staging areas would be fenced, screened where feasible, and managed to minimize visual nuisance and avoid substantial degradation of visual character and quality in adjacent areas. Dust control measures required under South Coast Air Quality Management District Rule 403 would reduce visible dirt and dust on public roadways and nearby properties. Overall, while construction would introduce temporary visual contrast within the corridor, these effects would not result in a substantial or long-term degradation of the visual environment. Thus, there would be no adverse effect.	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction or operational effects on this resource.	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Hazardous Materials (Transport, Storage, Use, and Disposal of Hazardous Materials)	Long-Term: The Build Alternative would involve the use of small amounts of hazardous substances, such as typical cleaning products used in maintenance. If the quantity of hazardous materials used, handled, or stored on-site would exceed regulatory thresholds, operations would adhere to all applicable existing federal, state, and local regulations pertaining to hazardous materials. Compliance with NPM HAZ-1 would ensure that cleaning and maintenance products are labeled with appropriate cautions and instructions for handling, storage, and disposal these materials would be in accordance with label directions. Compliance with NPM HAZ-3 would ensure that operation of the MSF would comply with existing regulations if the quantity of hazardous materials used, handled, or stored onsite exceeds the regulatory thresholds. As identified in NPM HAZ-1 and NPM HAZ-3, operational best management practices for hazardous materials would be implemented and the Build Alternative would have no adverse effect. Short-Term/Construction: The Build Alternative could expose the public or the environment to hazardous materials from the use of typical construction equipment and vehicles containing fuel, oil, and grease; hazardous building materials such as asbestos and lead based paint that could be encountered during demolition; and the use and transport of limited quantities of certain hazardous materials such as paints, solvents, and glues used during construction. NPM HAZ-2, NPM HAZ-4, and NPM HAZ-5 would implement construction best management practices for Hazardous materials. NMM HAZ-2 - Soil and Groundwater Management Plan would address potential handling and disposal of contaminated soil and groundwater, NMM HAZ-3 – Metro’s Contractor Specifications would provide guidance if soil and groundwater contamination is encountered, NMM HAZ-4 - Safety Manuals and Construction Work Plans would address worker health and safety and NMM HAZ-5 - Hazardous Building Survey and Abatement would require investigation into building materials or equipment that contains hazardous materials. Compliance with NMM HAZ-2 through NMM HAZ-5 to reduce adverse effects related to the use and/or storage of hazardous materials, transport of hazardous materials, and disposal of hazardous waste to not adverse.	Long-Term: No Adverse Effect Short-Term/Construction: Adverse Effect	Long-Term: NPM HAZ-1 - Operational Best Management Practices for Hazardous Materials NPM HAZ-3 - Operational Best Management Practices for Maintenance and Storage Facility for Hazardous Materials Short-Term/Construction: NPM HAZ-2 - Construction Best Management Practices for Hazardous Materials NPM HAZ-4 - Construction Best Management Practices for Maintenance and Storage Facility for Hazardous Materials NPM HAZ-5 - Construction Best Management Practices for Commerce/Citadel station for Hazardous Materials NMM HAZ-2 - Soil and Groundwater Management Plan NMM HAZ-3 – Metro’s Contractor Specifications NMM HAZ-4 - Safety Manuals and Construction Work Plans NMM HAZ-5 - Hazardous Building Survey and Abatement	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Hazardous Materials (Release of Hazardous Materials)	Long-Term: While it is anticipated that operation of the Build Alternative would not create a significant hazard to the public or the environment involving the release of hazardous materials into the environment, this operational analysis presents the potential possibilities of such a risk. No activities are proposed that would result in the use or discharge of unregulated hazardous materials. Hazardous materials could be stored within the Build Alternative site, but the materials would generally be in the form of routinely used common chemicals. Therefore, the probability of a major hazardous materials incident would be remote. Minor incidents would be more likely, but the consequences of the release of hazardous materials would likely not be severe due to the types of common chemicals anticipated to be used at the Build Alternative site. As identified in NPM HAZ-1 and NPM HAZ-3, operational best management practices for hazardous materials would be implemented and the Build Alternative would result in no adverse effect. Short-Term/Construction: While it is anticipated that construction of the Build Alternative would not create a significant hazard to the public or the environment involving the release of hazardous materials into the environment, this construction analysis presents the potential possibilities of such a risk. Construction of the Build Alternative would require grading and tunneling activities that would potentially expose construction workers and the public to hazardous conditions through disturbance of contaminated soil and/or groundwater. NMM HAZ-1 would require further investigation into potential soil and ground contamination. NMM HAZ-2 - Soil and Groundwater Management Plan would address potential handling and disposal of contaminated soil and groundwater, NMM HAZ-3 – Metro’s Contractor Specifications would provide guidance if soil and groundwater contamination is encountered, NMM HAZ-4 - Safety Manuals and Construction Work Plans would address worker health and safety and NMM HAZ-5 - Hazardous Building Survey and Abatement would require investigation into building materials or equipment that contains hazardous materials. The Build Alternative would adhere to existing federal and state regulations related to hazardous materials and implement NMM HAZ-1 through NMM HAZ-5 and would have no adverse effect.	Long-Term: No Adverse Effect Short-Term/Construction: Adverse Effect	Long-Term: NPM HAZ-1 - Operational Best Management Practices for Hazardous Materials NPM HAZ-3 - Operational Best Management Practices for Maintenance and Storage Facility for Hazardous Materials Short-Term/Construction: NMM HAZ-1 - Phase I Environmental Site Assessment [ESA] and Phase II ESA NMM HAZ-2 - Soil and Groundwater Management Plan NMM HAZ-3 - Metro’s Contractor Specifications NMM HAZ-4 - Safety Manuals and Construction Work Plans NMM HAZ-5 - Hazardous Building Survey and Abatement	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Hazardous Materials (Hazardous Materials Sites)	Long-Term: Any health risks to the public and/or the environment associated with release of hazardous materials would be mitigated during construction and would not occur after construction is complete. No ground-disturbing activities would occur during operations that could result in hazardous releases of contaminated soil from listed hazardous materials sites, thereby creating a significant hazard to the public or the environment. Short-Term/Construction: Disturbance of existing soil contamination from hazardous materials release sites or other sources could pose a health risk to construction workers, the public, and/or the environment if not characterized, handled, and disposed of properly, and therefore would result in an adverse effect. NPM HAZ-4 and NPM HAZ-5 would implement construction best management practices for the Build Alternative. NMM HAZ-1 would require further investigation into potential soil and ground contamination. NMM HAZ-2 - Soil and Groundwater Management Plan would address potential handling and disposal of contaminated soil and groundwater, NMM HAZ-3 – Metro’s Contractor Specifications would provide guidance if soil and groundwater contamination is encountered, NMM HAZ-4 - Safety Manuals and Construction Work Plans would address worker health and safety and NMM HAZ-5 - Hazardous Building Survey and Abatement would require investigation into building materials or equipment that contains hazardous materials. Construction would adhere to existing federal and state regulations related to hazardous materials as set forth in NPM HAZ-4 and NPM HAZ-5 and would implement NMM HAZ-1 through NMM HAZ-5 to reduce adverse effects related to listed hazardous materials sites to not adverse.	Long-Term: No Adverse Effect Short-Term/Construction: Adverse Effect	Long-Term: None Short-Term/Construction: NPM HAZ-4 - Construction Best Management Practices for Maintenance and Storage Facility for Hazardous Materials NPM HAZ-5 - Construction Best Management Practices for Commerce/Citadel station for Hazardous Materials NMM HAZ-1 - Phase I Environmental Site Assessment [ESA] and Phase II ESA NMM HAZ-2 - Soil and Groundwater Management Plan NMM HAZ-3 - Metro’s Contractor Specifications NMM HAZ-4 - Safety Manuals and Construction Work Plans NMM HAZ-5 - Hazardous Building Survey and Abatement	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Water Resources (Water Quality and Erosion)	Long-Term: The Build Alternative could release pollutants such as heavy metals and petroleum hydrocarbons over time. However, as described above, post-construction runoff and pollution control measures would be implemented, as required by National Pollutant Discharge Elimination System permits and identified in NPM HWQ-1. Thus, there would be no adverse effect. Short-Term/Construction: Construction could increase erosion and sedimentation and release pollutants that could affect water quality. Construction would comply with the National Pollutant Discharge Elimination System Construction General Permit and associated Stormwater Pollution Prevention Plan, as identified in NPM HWQ-2. The Study Area is relatively flat, which would minimize the risk of erosion and sedimentation. Areas of exposed soil that were previously paved would be repaved post construction. If encountered, groundwater contaminated with hazardous materials could spread into nearby surface water and groundwater, resulting in an adverse effect. Construction would adhere to applicable Waste Discharge Requirements and implement NMM HAZ-2, a Soil and Groundwater Management Plan to address handling and disposal of potential contaminated groundwater, and NMM HAZ-3, Metro's Contractor Specifications for encountering exposed soil and groundwater. Implementation of mitigation would reduce adverse effects to not adverse.	Long-Term: No Adverse Effect Short-Term/Construction: Adverse Effect	Long-Term: NPM HWQ-1 - Operational Best Management Practices for Water Resources Short-Term/Construction: NPM HWQ-2 - Construction Best Management Practices for Water Resources NMM HAZ-2 - Soil and Groundwater Management Plan NMM HAZ-3 – Metro's Contractor Specifications	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect
Water Resources (Groundwater Resources)	Long-Term: The Build Alternative would not substantially change the amount of impervious surfaces and would not affect the Rio Hondo Spreading Grounds where most of the groundwater recharge occurs. Thus, there would be no adverse effect. Short-Term/Construction: There would be no construction within the Rio Hondo Spreading Grounds where most of the groundwater recharge in the vicinity occurs. The groundwater depth near the underground guideway would likely be below or at the lower level of construction activities for the Build Alternative (Diaz-Yourman and Associates 2021); thus, the amount of water that would need to be extracted, cleaned, and disposed of during construction would be minimal. Thus, there would be no adverse effect.	Long-Term and Short-Term/Construction: No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction or operational effects on this resource.	Long-Term and Short-Term/Construction: No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Water Resources (Drainage)	Long-Term: The Build Alternative would not result in ground disturbance and there would be no change in erosion or sedimentation. Since the Build Alternative would be constructed on and under primarily impervious land, it would not substantially increase the volume or peaks of runoff entering the storm drain system. The Build Alternative would comply with post-construction measures in applicable National Pollutant Discharge Elimination System permits, as identified in NPM HWQ-1. Thus, there would be no adverse effect. Short-Term/Construction: Construction would comply with the Construction General Permit and associated Stormwater Pollution Prevention Plan best management practices, as identified in NPM HWQ-2. Drainage systems would be constructed and connected to municipal systems per Metro Rail Design Criteria and jurisdictional permits. Metro/Metro's contractor would be responsible for preparing the drainage and grading plans and obtaining approval of the plans before construction. Thus, there would be no adverse effect.	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect	Long-Term: NPM HWQ-1 - Operational Best Management Practices for Water Resources Short-Term/Construction: NPM HWQ-2 - Construction Best Management Practices for Water Resources	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Land Use and Development (Land Use Compatibility)	Long-Term: The new light rail transit components of the Build Alternative, including the MSF and its lead tracks, would all be designed to integrate into and be compatible with the existing character of the surrounding land uses. Operation of the Build Alternative would not interfere with pedestrian and vehicle crossings or affect vehicle, bicycle, or pedestrian access in the surrounding community and would follow best management practices to maintain circulation, as identified in NPM TRA-1 and NPM TRA-3. As set forth in NPM EFI-1, development of Metro-owned property would follow Metro's Joint Development and Transit Oriented Communities Policy, supporting redevelopment with transit oriented uses and reducing potential land use impacts. Thus, there would be no adverse effect. Short-Term/Construction: Lane and/or road closures during construction would result in temporary periodic movement limitations for pedestrians, cyclists, and vehicles within and between local communities. Disruptions to communities would be minimized using jurisdiction coordinated scheduling, advanced notification, and wayfinding signage, as set forth in NPM TRA-2. As identified in NPM TRA-4, access would be maintained to all properties surrounding the MSF. However, there would be an adverse effect from road and lane closures during construction. As required by NMM TRA-2, a Traffic Management Plan, would minimize disruptions during construction and reduce adverse effects to not adverse.	Long-Term: No Adverse Effect Short-Term/Construction: Adverse Effect	Long-Term: NPM TRA-1 - Operational Best Management Practices for Transportation NPM TRA-3 - Operational Best Management Practices for the Maintenance and Storage Facility Regarding Transportation NPM EFI-1 - Metro Joint Development Program and Metro Pilot Local Hiring Initiative Long-Term/Construction: NPM TRA-2 - Construction Best Management Practices for Transportation NPM TRA-4 - Construction Best Management Practices for the Maintenance and Storage Facility Regarding Transportation NMM TRA-2 - Traffic Management Plan	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect
Land Use and Development (Consistency with Land Use Plans)	Long-Term and Short-Term/Construction: The Build Alternative would be consistent with applicable land use plans because it would improve regional and local transit connectivity in a manner that supports adopted regional, county, and city goals for transit oriented development, improved mobility, and coordinated land use and transportation planning. Thus, there would be no adverse effect.	Long-Term and Short-Term/Construction: No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction or operational effects on this resource.	Long-Term and Short-Term/Construction: No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Acquisitions and Relocations (Acquisition, Displacement, Replacement, and Relocation)	Long-Term: The Build Alternative could result in potential property acquisitions for the Build Alternative systems and facilities. Properties subject to potential acquisition include relocation assistance and compensation in accordance with applicable federal and state relocation laws. Adherence to existing regulations would ensure that affected property are treated fairly and supported through the process. In addition, phased acquisition, advance notice, and coordination with local agencies would allow businesses sufficient time to relocate without significant disruption. As set forth in NPM TRA-3, operational best management practices would be implemented to maintain access to property and businesses during operation of the maintenance and storage facility. Thus, there would be no adverse effect. Short-Term/Construction: Construction activities could require some property acquisitions in the form of temporary construction easements to allow construction staging on public sidewalks, streets, and if necessary, private property. Temporary construction easements would include temporary staging areas (including tunnel boring machine launch site), materials and equipment storage, contractor site offices during the construction period, and areas for cut and cover activities. The properties used for temporary construction easements would be returned to their original owners; however, these temporary construction easements could last the duration of construction (60 to 84 months) and could result in an adverse effect on property and businesses. Short-term street and sidewalk closures during construction of the Build Alternative could result in temporary limitations on movement for vehicles, cyclists, and pedestrians, which could affect access to properties and businesses in general. As set forth in NPM TRA-2, best management practices would be implemented during construction to address pedestrian and vehicle access and minimize disruption from construction work zones. However, lane and road closures could result in adverse effects on businesses. For the MSF, as identified in NPM TRA-4, access would be maintained to all surrounding properties throughout the course of construction. NMM TRA-2 would require development of a Traffic Management Plan that specifies measures to minimize disruption during construction, such as establishing detour routes and coordinating with local business owner, and would reduce adverse effects to not adverse. Additionally, Metro has existing pilot programs that provide financial assistance to small businesses along rail corridors under construction.	Long-Term: No Adverse Effect Short-Term/Construction: Adverse Effect	Long-Term: NPM TRA-3 - Operational Best Management Practices for the Maintenance and Storage Facility Regarding Transportation Short-Term/Construction: NPM TRA-2 - Construction Best Management Practices for Transportation NPM TRA-4 - Construction Best Management Practices for the Maintenance and Storage Facility Regarding Transportation NMM TRA-2 - Traffic Management Plan	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect
Noise and Vibration (Noise)	Long-Term: Noise along the Build Alternative would be primarily due to passbys¹ from light rail transit vehicles for receptors near its aerial and at-grade configurations, in addition to operational noise for receptors near stationary noise sources (such as stations, the parking facility, or special trackwork such as switches). Noise generated by passby of light rail transit vehicles would not exceed the FTA severe noise impact criteria at any sensitive receptors because of the distance of receptors from the alignment and/or intervening	Long-Term: No Adverse Effect Short-Term/Construction: Adverse Effect	Long-Term: NPM NOI-1 - Operational Design Standards for Noise	Long-Term: No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
	structures, high existing ambient noise levels near receptors, and because a portion of the alignment would be underground. Noise from at-grade crossings (warning bells) and special trackwork (e.g., turnouts and crossovers) would be adjacent to manufacturing and commercial properties with high existing ambient noise levels. Thus, this noise would not exceed the FTA severe noise impact criteria at any sensitive receptors and there would be no adverse effect. Operational noise levels for the traction power substation would be substantially lower than existing ambient noise levels and design standards would be implemented to reduce their noise levels, as set forth in NPM NOI-1. One noise-sensitive historic property, the Kelly House at 860 Washington Boulevard, is approximately 80 feet from the crossover east of Greenwood station and is currently used as a residence. One historic property, the Greenwood Elementary School, which is currently used as a school, is adjacent to the Build Alternative but outside of the FTA screening distance. In total, four non-residential receptors, a park, library, and two schools, could potentially be impacted by airborne noise. None of the Build Alternative noise levels at these receptors are predicted to exceed the FTA moderate or severe impact criteria along the Build Alternative alignment. Short-Term/Construction: The Build Alternative would have adverse noise effects from the use of construction equipment near properties and sensitive receptors. As set forth in NPM NOI-2, construction activities would be carried out in compliance with Metro's Construction Noise and Vibration Control baseline specifications. Implementation of NMM NOI-1 through NMM NOI-10 would reduce the reasonably foreseeable adverse effects during construction to not adverse. NMM NOI-1 would require implementation of a noise control plan and construction monitoring plan. NMM NOI-2 would require Metro's contractor to use cast-in-drilled holes or drilled piles rather than impact pile drivers where necessary. NMM NOI-3 would require the construction contractor to erect temporary noise barriers between noisy activities and noise sensitive receptors. NMM NOI-4 would require Metro's contractor to locate construction equipment and material staging areas away from sensitive receptors where practicable. NMM NOI-5 would require construction traffic and haul route routing in areas without noise-sensitive receptors where practicable. NMM NOI-6 would require contractors to use best available control technologies to limit excessive noise when working near residences where practicable. NMM NOI-7 would require Metro to establish a Construction Hotline to resolve noise issues arising from construction activities. NMM NOI-8 and NMM NOI-9 would lessen noise associated with spoil removal where necessary, and NMM NOI-10 would require ventilation fans to be placed away from sensitive receptors.		Short-Term/Construction: NPM NOI-2 - Construction Noise and Vibration Control NMM NOI-1 - Construction Noise Plan and Noise Monitoring Plan NMM NOI-2 - Cast-in-Drilled-Hole Construction Methodology NMM NOI-3 - Noise Barriers NMM NOI-4 - Construction Staging Area NMM NOI-5 - Haul Routes NMM NOI-6 - Best Available Control Technologies NMM NOI-7 - Construction Working Hours NMM NOI-8 - Public Notification of Construction Operations and Schedules NMM NOI-9 - Truck Staging NMM NOI-10 - Tunnel Vent Fans Away From Residences	Short-Term/Construction: No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Noise and Vibration (Vibration)	Long-Term: Corridor-wide vibration levels are predicted to exceed the FTA frequent criterion for vibration, resulting in an adverse effect. With implementation of NMM NOI-11 and NMM NOI-12, adverse operational vibration effects would be reduced to not adverse. NMM NOI-11 would require the use of track support systems to reduce vibratory impacts caused by steel wheels rolling over steel rails at rail joints during the passby of LRT vehicles at residences and NMM NOI-12 would reduce vibratory levels by reducing the width of gaps at joints when steel wheels roll over steel rails at rail joints. Short-Term/Construction: The Build Alternative would have adverse vibration effects from the use of construction equipment. As set forth in NPM NOI-2, construction activities would be carried out in compliance with Metro's Construction Noise and Vibration Control baseline specifications. Implementation of NMM NOI-2, NMM NOI-4, NMM NOI-5, NMM NOI-7, NMM NOI-8, NMM NOI-13, and NMM NOI-14 would reduce the potential vibration-related adverse effects during construction to not adverse. NMM NOI-2 would require Metro/Metro's contractor to use cast-in-drilled hole or drilled piles rather than impact pile drivers to reduce excessive vibration where necessary to meet performance criteria. NMM NOI-4 would require Metro/Metro's contractor to locate construction equipment and material staging areas away from sensitive receptors. NMM NOI-5 would require Metro/Metro's contractor to route construction traffic and haul routes away from sensitive receptors where practicable. NMM NOI-7 would require Metro/Metro's contractor to establish a Construction Hotline to resolve vibration issues. NMM NOI-8 would require using a spoil removal conveyor for the TBM where necessary to reduce vibration. NMM NOI-13 would require Metro/Metro's contractor to identify properties that may be susceptible to vibration damage within 100 feet of the alignment to provide data for monitoring vibration effects and developing the construction vibration control plan and monitoring plan described in NMM NOI-14. NMM NOI-14 would require Metro/Metro's contractor to develop a construction vibration control plan and a construction vibration monitoring plan to minimize vibration effects and reduce the risk of damage to susceptible structures.	Long-Term: Adverse Effect Short-Term/Construction: Adverse Effect	Long-Term: NMM NOI-11 - Operational Vibration Mitigation — Tunnel NMM NOI-12 - Operational Vibration Mitigation Short-Term/Construction: NPM NOI-2 - Construction Noise and Vibration Control NMM NOI-2 - Cast-in-Drilled-Hole Construction Methodology NMM NOI-4 - Construction Staging Area NMM NOI-5 – Haul Routes NMM NOI-7 – Construction Working Hours NMM NOI-8 - Public Notification of Construction Operations and Schedules NMM NOI-13 – Identify Vibration Susceptible Properties NMM NOI-14 - Vibration Pre-Construction Survey and Control Plan	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Safety and Security (Safety)	Long-Term: The introduction of light rail vehicles adjacent to traffic lanes for the at-grade alignment along Washington Boulevard could create a safety concern for pedestrians and bicyclists at intersection crossings. The proposed stations would likely raise demand of pedestrians crossing nearby street intersections and, therefore, would need intersections near stations to provide adequate capacity and safety for pedestrians. As identified in NPM TRA-1, best practice safety measures would be implemented to minimize potential conflicts between vehicles and pedestrians. As standard practice, and set forth in NPM SAF-1, Metro would implement educational outreach efforts in coordination with local schools, libraries, and community centers located near the Build Alternative. Thus, there would be no adverse effect. Short-Term/Construction: Disruption during construction, including the use of large construction equipment and haul trucks, would create potential safety hazards for pedestrians, bicyclists, bus riders, and motorists. Implementation of safety measures such as signage, partial lane closures, construction barriers, and supervision by safety and security personnel. Compliance with safety requirements, including Occupational Safety and Health Administration, California Occupational Safety and Health Administration, and Metro safety and security programs, as identified in NPM TRA-2, would be implemented. Additionally, implementation of NMM TRA-2, requiring a Traffic Management Plan, would reduce adverse effects from road and lane closures to not adverse.	Long-Term: No Adverse Effect Short-Term/Construction: Adverse Effect	Long-Term: NPM TRA-1 - Operational Best Management Practices for Transportation NPM SAF-1 - Fire and Police Best Management Practices Short-Term/Construction: NPM TRA-2 - Construction Best Management Practices for Transportation NMM TRA-2 - Traffic Management Plan	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect
Safety and Security (Security)	Long-Term: Security issues, such as fare evasion, assault, or robbery could potentially occur at light rail transit stations, within light rail transit vehicles, and at associated parking facilities. As standard operating practice, and as set forth in NPM SAF-1, Metro would supplement existing police protection services by providing Transit Services Bureau officers and contracted police services at all new light rail transit facilities, as needed to ensure that adequate police protection services are provided. Thus, there would be no adverse effect. Short-Term/Construction: The presence of construction equipment and use of construction staging could result in security incidents, such as theft and vandalism. For security purposes, construction staging areas would be equipped with a combination of fences, lighting, security cameras, and/or guards. Additionally, construction would comply with Metro guidelines pertaining to security and the implementation of standard site security practices identified in NPM TRA-2. Thus, there would be no adverse effect on security related to construction activities.	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect	Long-Term: NPM SAF-1 - Fire and Police Best Management Practices Short-Term/Construction: NPM TRA-2 - Construction Best Management Practices for Transportation	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Safety and Security (Emergency Response)	Long-Term: The Build Alternative would potentially increase fire and police protection response times as a result of delays at new grade crossings. As standard practice and as identified in NPM SAF-1, the contractor would coordinate with fire and police protection officials when designing grade crossings. In addition, as identified in NPM TRA-1 and NPM TRA-3, all new light rail transit facilities and crossings would be designed in accordance with the Metro Rail Design Criteria, including the Fire/Life Safety Criteria, to ensure safety and minimize potential hazards at all locations. Thus, there would be no adverse effect. Short-Term/Construction: The potential for incidents of crime and terrorism could occur at construction sites and staging areas and could pose threats to human life and safety. Construction sites would be secured to prevent intrusion and illegal activities during construction as identified in NPM TRA-2. Emergency access could temporarily be obstructed by construction activities that could include temporary lane closures and obstruction of driveways. For the MSF, alternative routes would be available for any streets requiring closure, as set forth in NPM TRA-4. However, there would be an adverse effect due to lane closures. Implementation of NMM TRA-2 would require development of a Traffic Management Plan to facilitate access to local facilities impacted by road or lane closures, which would reduce adverse effects to not adverse.	Long-Term: No Adverse Effect Short-Term/Construction: Adverse Effect	Long-Term: NPM SAF-1 - Fire and Police Best Management Practices NPM TRA-1 - Operational Best Management Practices for Transportation NPM TRA-3 - Operational Best Management Practices for the Maintenance and Storage Facility Regarding Transportation Short-Term/Construction: NPM TRA-2 - Construction Best Management Practices for Transportation NPM TRA-4 - Construction Best Management Practices for the Maintenance and Storage Facility Regarding Transportation NMM TRA-2 - Traffic Management Plan	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect
Transportation Impacts (Transit)	Long-Term: The Build Alternative would provide transit travel time savings compared to the No Build Alternative. The Build Alternative's light rail transit service would result in less travel time compared to bus service between the Atlantic/Pomona station and Greenwood station. Thus, there would be no adverse effect. Short-Term/Construction: Temporary roadway closures, lane closures, bus stops, and sidewalk closures could disrupt the circulation system. These closures would result in a temporary adverse effect on transit operation. Implementation of NMM TRA-2, a Traffic Management Plan, would reduce this potential adverse effect on transit to not adverse.	Long-Term: No Adverse Effect Short-Term/Construction: Adverse Effect	Long-Term: None Short-Term/Construction: NMM TRA-2 - Traffic Management Plan	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Transportation Impacts (Travel Patterns)	Long-Term: The Build Alternative would result in reduced VMT and vehicle hours traveled compared to the No Build Alternative. The operation of the MSF would not result in a substantial or measurable increase in VMT and vehicle hours traveled. Thus, there would be no adverse effect. Short-Term/Construction: Construction could temporarily generate additional VMT related to construction work activities. Construction work activities are temporary and localized to the work area. As identified in NPM TRA-2, the Project would coordinate construction related traffic and travel patterns with the Cities of Commerce and Montebello and Los Angeles County throughout the construction process. Implementation of NPM TRA-2, Construction Best Management Practices for Transportation, would not result in a substantial change in travel patterns or increase VMT during the construction of the Build Alternative. Thus, there would be no adverse effect.	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect	Long-Term: None Short-Term/Construction: NPM TRA-2 - Construction Best Management Practices for Transportation	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect
Transportation Impacts (Local Roadway Circulation)	Long-Term: The Build Alternative could result in roadway modifications to accommodate the light rail transit guideway, providing long-term mobility benefits. The MSF would involve only minor changes to traffic circulation, including new or modified driveways. The Build Alternative would follow best management practices for transportation, as set forth in NPM TRA-1. However, the Build Alternative could result in a single intersection (Intersection #32: Garfield Avenue and Washington Boulevard) to move from Level of Service D to Level of Service E in the pm peak due to a reduction of travel lanes on Washington Boulevard, resulting in an adverse effect. Implementation of NMM TRA-1 would require one left-turn lane to be added in the southbound approach of Intersection #32 to optimize this intersection's cycle length and splits. This would reduce the adverse effect to not adverse. Short-Term/Construction: The Build Alternative could require temporary closures and detours that would cause a reduction in capacity along affected roads. Construction activities would be temporary and localized to the work area and would follow best management practices for transportation, as set forth in NPM TRA-2 and NPM TRA-4. However, there would be an adverse effect on circulation from road and lane closures. Implementation of NMM TRA-2, a Traffic Management Plan, would reduce this adverse effect on pedestrians and bicyclists to not adverse.	Long-Term: Adverse Effect Short-Term/Construction: Adverse Effect	Long-Term: NPM TRA-1 - Operational Best Management Practices for Transportation NMM TRA-1 - Garfield Avenue and Washington Boulevard Intersection Short-Term/Construction: NPM TRA-2 - Construction Best Management Practices for Transportation NPM TRA-4 - Construction Best Management Practices for the Maintenance and Storage Facility Regarding Transportation NMM TRA-2 - Traffic Management Plan	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Transportation Impacts (Parking)	Long-Term: The Build Alternative could remove and relocate the parking supply. Off- and on-street parking facilities may be utilized for construction activities. For off-street parking spaces that are associated with full takes of parcels and their businesses, the demand for these spaces would be eliminated as well. As such, there would be no adverse effects on off-street parking with the full removal of these parcels. The MSF would provide sufficient on-site parking for employees, and no operational spillover parking effects on off-street or on-street parking facilities would occur. Thus, there would be no adverse effect. Short-Term/Construction: Although temporary, the potential effects on parking could result in a temporary adverse effect from construction of the Build Alternative. Work activities would be temporary and localized to the work area and implementation of NMM TRA-2, a Traffic Management Plan, would reduce this potential adverse effect on parking to not adverse.	Long-Term: No Adverse Effect Short-Term/Construction: Adverse Effect	Long-Term: None Short-Term/Construction: NMM TRA-2 Traffic Management Plan	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect
Transportation Impacts (Pedestrian and Bicyclists)	Long-Term: The Build Alternative would provide bicycle circulation and access amenities in the station areas. In addition, the Build Alternative would enhance walkability in the immediate vicinity of the proposed stations and include improvements coordinated with local jurisdictions. Additional enhancements to existing signalized crosswalks, such as continental crosswalks, would further improve pedestrian access to transit stations as identified in NPM TRA-1. Thus, there would be no adverse effect. Short-Term/Construction: Temporary sidewalk closures could be required and short-term lane or roadway closures could affect existing and proposed bike routes. NPM TRA-2 would be implemented during construction of the Build Alternative to address pedestrian and vehicle access and minimize disruption from construction work zones. As set forth in NPM TRA-4, site access to the MSF and surrounding properties will be retained and meet design requirements during construction. However, there would be an adverse effect from road and lane closures. Implementation of NMM TRA-2, a Traffic Management Plan, would reduce this adverse effect on pedestrians and bicyclists to not adverse.	Long-Term: No Adverse Effect Short-Term/Construction: Adverse Effect	Long-Term: NPM TRA-1 - Operational Best Management Practices for Transportation Short-Term/Construction: NPM TRA-2 - Construction Best Management Practices for Transportation NPM TRA-4 - Construction Best Management Practices for the Maintenance and Storage Facility Regarding Transportation NMM TRA-2 - Traffic Management Plan	Long-Term: No adverse effect Short-Term/Construction: No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Transportation Impacts (Emergency Access)	Long-Term: The Build Alternative could potentially increase fire and police response times due to brief delays at new grade crossings; however, these would be minimal because of the short train lengths and limited crossing times. Emergency vehicles would continue to have access through coordinated signal operations and design measures ensuring quick clearance of intersections. Standard coordination with police and fire departments, compliance with applicable design and safety standards (including Fire/Life Safety Criteria), and construction of a new access road on 3rd Street to the Los Angeles County Sheriff's Department would maintain or improve emergency access. The Build Alternative would follow best management practices for transportation, as set forth in NPM TRA-1. The MSF would include minor changes to traffic circulation, such as new or modified driveways, but these changes would be designed according to applicable state, Metro, and local design criteria and standards as identified in NPM TRA-3. Thus, there would be no adverse effect. Short-Term/Construction: Temporary construction-related street closures or detours could potentially increase fire and police protection response times. The Build Alternative would follow best management practices for transportation, as set forth in NPM TRA-2. However, there would be an adverse effect on circulation from road and lane closures. Implementation of NMM TRA-2, a Traffic Management Plan, would reduce this potential adverse effect on emergency access to not adverse.	Long-Term: No Adverse Effect Short-Term/Construction: Adverse Effect	Long-Term: NPM TRA-1 - Operational Best Management Practices for Transportation NPM TRA-3 - Operational Best Management Practices for the Maintenance and Storage Facility Regarding Transportation Short-Term/Construction: NPM TRA-2 - Construction Best Management Practices for Transportation NMM TRA-2 - Traffic Management Plan	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect
Utilities (Water Supplies and Facilities)	Long-Term: The proposed light rail transit guideway and stations would consume water for landscaping irrigation and to supply fire sprinkler systems when/if needed. The MSF would consume water for landscaping irrigation, vehicle washing/rinsing, fire sprinkler systems, and typical employee breakroom/kitchen uses. The Build Alternative is anticipated to result in a small percentage increase in municipal water demand; however, the amount consumed would be less than the projected future capacity of available water supplies. Thus, there would be no adverse effect. Short-Term/Construction: Use of minimal water, mostly for dust control, would be temporary and intermittent and would not necessitate the relocation or expansion of potable water infrastructure. Construction of the MSF would include relocation and installation of new domestic water and fire water pipelines. Relocation of any water appurtenances (e.g., fire hydrants and water meters) would be near existing facilities, which would minimize impacts from ground disturbance. The relocated water appurtenances would connect to existing pipelines and would not create new demand for water that would exceed the capacity of the water supply system. Thus, there would be no adverse effect.	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction or operational effects on this resource.	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Utilities (Wastewater Treatment Facilities and Capacity)	Long-Term: The proposed light rail transit stations would not have public restrooms and, as a result, would not generate wastewater. Thus, there would be no adverse effect. Short-Term/Construction: Activities would generate wastewater through the use of temporary worker restrooms and would require new sewer line connections for the MSF. No construction activities would exceed sewer capacity, generate significant wastewater, or necessitate the relocation or expansion of wastewater facilities. Thus, there would be no adverse effect.	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction or operational effects on this resource.	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect
Utilities (Stormwater Facilities)	Long-Term: The Build Alternative is in an urbanized area that is largely impervious and has existing storm drain infrastructure. The Build Alternative would result in a negligible increase in impervious surfaces, but not to an extent that would lead to increased runoff. The Build Alternative would also include low impact design features to facilitate drainage flow in compliance with stormwater control requirements, such as those established in the California Green Building Standards Code and set forth in NPM HWQ-1. Thus, there would be no adverse effect. Short-Term/Construction: Runoff could be generated by construction activities, such as dewatering and vegetation removal. Compliance with National Pollution Discharge Elimination System Construction General Permit and implementation of best management practices, as identified in NPM HWQ-2, would control runoff from construction. Thus, construction would not create or contribute runoff water that would exceed the capacity of the stormwater drainage system, and there would be no adverse effect.	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect	Long-Term: NPM HWQ-1 - Operational Best Management Practices for Water Resources Short-Term/Construction: NPM HWQ-2 - Construction Best Management Practices for Water Resources	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect
Utilities (Electric Power)	Long-Term: The amount of electricity consumed for the Build Alternative during operation would be less than the projected future capacity of electricity supplies available. Further, the aerial guideway would require relocation of utility support poles, which would not result in an expansion of electricity usage. Thus, there would be no adverse effect. Short-Term/Construction: The Build Alternative would include installation of a power line for the tunnel boring machine and relocation and installation of electric lines to accommodate the site layout for the MSF. Demand impacts related to this new power service feed would be temporary and would not result in a substantial change in usage that could affect the capacity of service providers (i.e., Southern California Edison). Thus, the Build Alternative would not result in adverse effects related to relocation or construction of electric power.	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction or operational effects on this resource.	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Utilities (Natural Gas)	Long-Term: The proposed light rail transit guideway and stations would not consume natural gas. The MSF would consume gas for routine maintenance activities and heating. The use of natural gas at the MSF would be substantially less than the projected future capacity of natural gas supplies. Therefore, operation of the Build Alternative would not require any notable expansion of an existing facility or construction of a new facility, and there would be no adverse effect. Short-Term/Construction: Construction activities would consume minimal, temporary, and intermittent natural gas for construction equipment. Construction activities for the light rail transit guideway and stations would mostly take place within existing public right-of-way and no natural gas facilities have been identified in the construction zone that would require relocation. Construction of the MSF would include the relocation and installation of gas pipelines, which would connect to existing pipelines and would not create new demand for natural gas that would exceed the capacity of the SoCal Gas supply system. Thus, there would be no adverse effect.	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction or operational effects on this resource.	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect
Utilities (Telecommunication)	Long-Term: Minor telecommunication connections for equipment like emergency phones may be installed and used at stations and in certain locations along the guideway. However, operations would not require any notable expansion of an existing facility or construction of a new facility. Thus, there would be no adverse effect. Short-Term/Construction: Construction may require the relocation of telecommunication facilities. If relocated, the telecommunication facilities would be relocated in close proximity to their previous location. Construction would not require or result in any notable expansion of possible relocated telecommunication facilities or construction of new facilities. Thus, there would be no adverse effect.	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction or operational effects on this resource.	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Utilities (Solid Waste)	Long-Term: The light rail transit guideway and stations would not include an operational source of solid waste although solid waste would be generated by transit users and by employees at the MSF. The disposal of solid waste from waste and recycle bins would have no notable potential to affect landfill capacity. Thus, there would be no adverse effect. Short-Term/Construction: Construction would involve the generation and removal of solid waste associated with the various demolition and construction activities. This would result in an incremental and temporary increase in solid waste disposal at landfills and other waste disposal facilities. Some excavated soil may be reused on-site, and the remaining materials would be hauled off-site for disposal at any of the area landfills that accept and/or recycle construction/demolition materials in compliance with Assembly Bill 939. Waste would be brought to transfer stations in batches throughout the construction period and there are multiple transfer stations in Los Angeles County where this waste could be collected and transferred to the landfill. The County anticipates adequate solid waste disposal capacity to be available over the next 15-year planning period (2019 to 2034) (LACDPW 2021). Thus, there would be adequate capacity available in Los Angeles County to handle anticipated solid waste generation during the construction period, and there would be no adverse effect.	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect	No avoidance, minimization, or mitigation measures are proposed.	Long-Term: No Adverse Effect Short-Term/Construction: No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Section 4(f) Use through permanent incorporation and/or temporary occupancy	Section 4(f) protects publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, as well as land of a publicly or privately owned historic site of national, state, or local significance. There are 10 historic Section 4(f) resources in the Area of Potential Effects and 6 park recreation Section 4(f) resources in the study area. Property acquisition, demolition and/or construction activities could represent a use through permanent incorporation and/or temporary occupancy to three of these resources: the National Chicano Moratorium March Historic District, the Vail Field Industrial Addition historic district, and the Pacific Metals Company building (if MSF Site 2 is selected). <u>National Chicano Moratorium March:</u> Construction would remove and replace the asphalt pavement along portions of the historic district's contributing march route. A trench would be installed within the existing right-of-way at 3rd Street and La Verne Avenue. Temporary occupancy from construction would represent a use. The Build Alternative would not reconfigure the streets and sidewalks, which would continue to be constructed with matching materials (asphalt and concrete). None of the district's character-defining features or contributing elements would be demolished or altered. The historic district would still convey its historical significance and there would be no adverse effect on the march route. Therefore, the Build Alternative would result in a <i>de minimis</i> impact. <u>Vail Field Industrial Addition Historic District:</u> Construction would permanently acquire and demolish six contributors to the historic district. Permanent incorporation from acquisition and demolition and temporary occupancy from construction activities would represent a use. However, none of these contributors are individually eligible historic properties. The core would remain intact with enough contributors to convey its historical significance. Therefore, the Build Alternative would not have an adverse effect on the historic district and the use from the Build Alternative would result in a <i>de minimis</i> impact. <u>Pacific Metals Company and MSF Site 2:</u> The aerial guideway would be within the parking lot of the Pacific Metals Company building and would require partial permanent property acquisition. Permanent incorporation from acquisition and temporary occupancy from guideway construction activities would represent a use. However, the guideway would be at a relatively similar height to the existing utility infrastructure and would not alter the building's façade or diminish the integrity of the building's significant design features. The construction activities and alteration of the setting with the new visual element of the aerial structure would not materially impair the building's integrity and would thus result in no adverse effect. Therefore, the Build Alternative would result in a <i>de minimis</i> impact.	Long-Term and Short-Term/Construction: <i>De Minimus</i> Impact	No avoidance, minimization, or mitigation measures are proposed.	Long-Term and Short-Term/Construction: <i>De Minimus</i> Impact

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Section 4(f) Constructive Use	Construction could produce localized noise and air pollutant emissions or result in temporary lane and/or road closures that could affect any of the Section 4(f) resources. As set forth in NPM TRA-2 and NPM NOI-2, the Build Alternative would adhere to transportation best management practices and noise specifications during construction. Implementation of NMM NOI-1, a Construction Noise Plan and Noise Monitoring Plan, and NMM TRA-2, a Traffic Management Plan, would reduce adverse effects from noise and traffic circulation changes during construction to not adverse. The new open trench along 3rd Street could adversely impact access to Belvedere Park Lake by eliminating vehicle and pedestrian crossings of 3rd Street at La Verne Avenue and left turns at Civic Center Way. U-turns would be allowed at Medick Avenue and Woods Avenue. Vehicles could also access Belvedere Park Lake from the existing entrance on Mednick Avenue. The existing crosswalk at Civic Center Way would remain and a new pedestrian crosswalk east of La Verne Avenue would be constructed to provide access. Therefore, access to the park would be maintained and there would be no constructive use. The underground guideway and Atlantic/Whittier station would be within 80 feet of the Golden Gate Theater. Vibration could adversely affect the historic resource; however, NMM CUL-1 would require protection measures that would reduce the potential for construction vibration to damage the Golden Gate Theater. Thus, there would be no constructive use this Section 4(f) Resource.	Long-Term: Not applicable Short-Term/Construction: Constructive Use	Long-Term: Not applicable Short-Term/Construction: NPM TRA-2 - Construction Best Management Practices for Transportation NPM NOI-2 - Construction Noise and Vibration Control NMM TRA-2 - Traffic Management Plan NMM NOI-1 - Construction Noise Plan and Noise Monitoring Plan NMM CUL-1 - Protection Measures – Differential Settlement/Vibration/Tunnel Boring Machine [TBM] Specifications for CVS Pharmacy [CVS]/Golden Gate Theater	Long-Term and Short-Term/Construction: No Constructive Use

Source: Metro; CDM Smith/AECOM JV 2026.

Note:

¹ A passby refers to the event of a transit vehicle (e.g., train, light rail vehicle, or bus) moving past a specific location.

1.0 PURPOSE AND NEED

1.1 Background

The Federal Transit Administration (FTA), in coordination with the Los Angeles County Metropolitan Transportation Authority (LACMTA or Metro) proposes the Eastside Transit Corridor Phase 2 Project (Project), to extend the E Line Eastside Extension in eastern Los Angeles County further east and is the subject of this Environmental Assessment (EA). The Project is a federal undertaking as it is expected to receive funding assistance from FTA. The FTA serves as the federal lead agency for compliance in accordance with National Environmental Policy Act (NEPA) environmental requirements per Title 23 Code of Federal Regulations (CFR) 771.119. Additional details on the Project alternatives and the screening process are provided in **Chapter 2.0** (Description of Alternatives).

1.2 Project Purpose and Need

1.2.1 Project Purpose

The purpose of the Project is to reduce travel times for communities in eastern Los Angeles County and provide new multimodal connections to destinations within the greater Southern California region. By serving highly concentrated areas of employment, activity centers, and residential communities, the Project would expand economic opportunities and promote the growth of local economies, while supporting transit oriented community goals and addressing the travel needs of transit dependent populations. It would enhance regional connectivity by providing new and faster multimodal options and lead to economic development and infill growth opportunities throughout eastern Los Angeles County.

In support of the goals in Metro's 2020 Long Range Transportation Plan (LRTP) (Metro 2020a) and Metro's Vision 2028 Strategic Plan (Metro 2018a), the purposes of the Project are to:

- Enhance regional connectivity between eastern Los Angeles County communities and the greater Southern California region.
- Accommodate growing travel demand resulting from increased future population and employment growth.
- Provide mobility options to increase travel efficiencies to and from eastern Los Angeles County.
- Improve access to existing concentrations of activity centers and employment within eastern Los Angeles County.
- Enable jurisdictions in eastern Los Angeles County to promote growth in their local economies.
- Improve accessibility and connectivity for transit dependent populations.

1.2.2 Project Need

The Project addresses the transportation needs of eastern Los Angeles County communities which face high population and employment growth and constrained transportation facilities. Future population and employment growth will contribute to increases in travel demand which, if unaddressed, will overwhelm existing and future transportation networks, impact goods movement, and exceed transit capacities in eastern Los Angeles County. The Project is needed to address growing population and employment densities, congestion impacts on bus transit and vehicle travel, quality of life, and high transit demand within the Study Area, as discussed below:

- **Growing population and employment densities** – By year 2050, already high-density communities within the Study Area are expected to grow an additional 3 percent to 10 percent.¹ As population and employment grow, existing traffic would also continue to grow, increasing travel times and lowering travel speeds. Providing improved transit opportunities in Eastern Los Angeles County would help alleviate this increase in congestion and will also improve access to high-density activity centers in the Study Area and throughout Metro’s regional transit system.
- **Local roadway congestion impacts on bus transit** – With limited regional rail system connections in the Study Area, residents, employees, and visitors rely on bus services that operate on a congested arterial network. This congestion negatively affects the reliability and consistency of local and regional transit services. In addition, there are no existing or planned direct routes that would parallel the Project corridor without several bus transfers.
- **Arterial and freeway congestion impacts on vehicle travel** – Existing Study Area freeways and roadways are highly congested during peak periods, with the heaviest congestion occurring on Interstate 5, State Route 60, and Interstate 10 freeways to and from Downtown Los Angeles. Other nearby freeways, such as Interstate 710 and Interstate 605, are also congested during peak hours and east-west movements along parallel arterials such as Washington Boulevard experience heavy truck traffic from goods movement throughout the day.
- **Quality of life** – The communities of eastern Los Angeles County are faced with increasing air quality concerns, particularly given areas of industrial activity in the Cities of Commerce and Montebello and unincorporated East Los Angeles. Improving quality of life can be achieved by enhancing access to transit services and other mobility options. Encouraging transit ridership would generate economic benefits by reducing vehicle trips, lessening roadway congestion, and reducing emissions from several air pollutants.
- **High transit demand** – The Study Area has high transit demand as the travel market includes a large number of households that use and depend on transit such as low-income populations, youth and seniors, and households that do not own vehicles. Within the Study Area, approximately 15 percent of households are low-income,² 37 percent of residents are youth and seniors, and 10 percent of households do not own a vehicle³ (United States Census Bureau 2022). To address this strong transit demand, more access and connectivity to public transportation is needed within the Study Area.

¹ The City of Montebello’s population density (8,330 residents per square mile) is more than three times the density of Los Angeles County as a whole (2,500 residents per square mile), and would continue to grow to almost 8,600 residents per square mile by 2050. Even more striking is the existing employment density within the City of Commerce (9,480 jobs per square mile), which is more than seven times the employment density of Los Angeles County as a whole (1,265 jobs per square mile) and is projected to reach 9,700 jobs per square mile by 2050 (Southern California Association of Governments 2024a).

² Approximately 15 percent of the population of the Study Area is considered low-income and living below the poverty threshold in 2022 (United States Census Bureau 2022).

³ Approximately 10 percent of households in the Study Area are zero-car households without access to private vehicles in 2022 (United States Census Bureau 2022).

2.0 DESCRIPTION OF ALTERNATIVES

This chapter outlines the No Build Alternative and Build Alternative evaluated in this EA. **Section 2.1** summarizes the Project's history, and **Section 2.2** and **Section 2.3** detail both alternatives. The Build Alternative, approved as the Locally Preferred Alternative by the Metro Board on December 1, 2022, with the Final Environmental Impact Report (EIR) certified in May 2024, is carried forward for environmental analysis with refinements based on engineering updates and input from the Corridor Cities (see Section 1.1.2.4 in **Appendix E** [Project Description and Alternatives Considered] for details).

The United States Environmental Protection Agency is serving as a Cooperating Agency, the California Department of Transportation is a Participating Agency, and the United States Army Corps of Engineers declined participation on the Project. The FTA and Metro has coordinated and will continue to coordinate with these and other agencies throughout the process (see **Appendix Q** [Public Outreach Report] for agency coordination details).

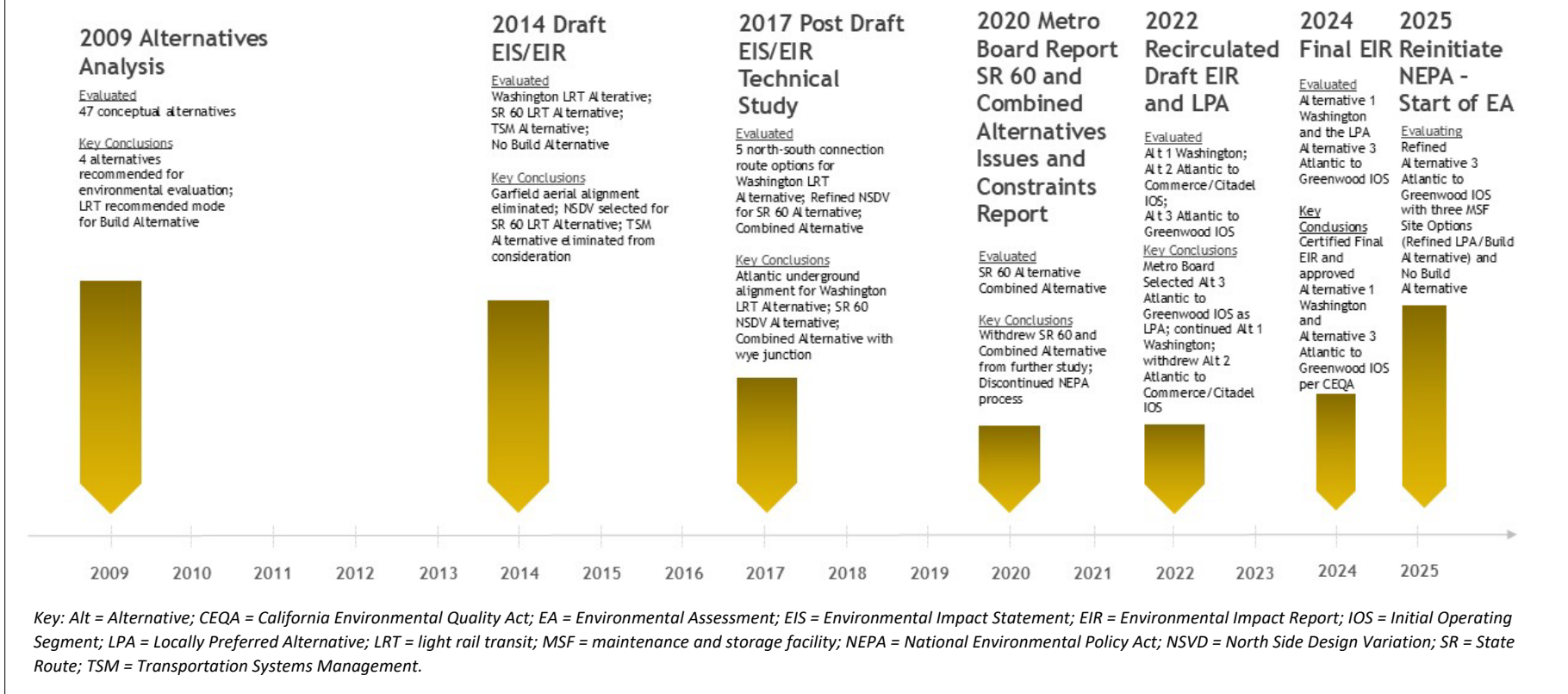
2.1 Alternatives Screening and Selection Process

As described in greater detail in **Appendix E** and summarized in **Figure 2.1**, the Project has undergone extensive planning and environmental review, beginning with an Alternatives Analysis published in 2009 that screened 47 concepts. This was subsequently narrowed down to four alternatives that were analyzed in a joint NEPA/California Environmental Quality Act (CEQA) Draft Environmental Impact Statement (EIS)/EIR in 2014. The four alternatives included a No Build Alternative, Transportation Systems Management Alternative, a 6.9 mile State Route 60 Alternative, and a 9.5 mile Washington Boulevard Alternative. Based on agency and public comments, no Final EIS or Final EIR was issued. The Metro Board directed that further study be conducted on the State Route 60 Alternative and Washington Boulevard Alternative and that a new north-south connection to Washington Boulevard be identified. Following further study and stakeholder coordination, the Metro Board approved the preparation of Recirculated Draft EIR pursuant to CEQA to evaluate the Washington Boulevard alignment and eliminated consideration of the State Route 60 Alternative in February 2020. At the same time, the Metro Board directed the NEPA process to be discontinued to streamline the environmental clearance process. The Recirculated Draft EIR, published in June 2022, evaluated three build alternatives (with two design options), two maintenance and storage facility (MSF) site options, and a No Project Alternative. On December 1, 2022, the Metro Board selected the Atlantic-to-Greenwood Initial Operating Segment as the Locally Preferred Alternative and advanced the alignment for the Final EIR, which was certified in May 2024.

In 2025, Metro began coordination with FTA to discuss federal environmental clearance for federal funding opportunities to carry out the engineering and construction for the Build Alternative. On May 7, 2025, Metro requested an environmental Class of Action determination from FTA to advance into the NEPA process with an EA. On May 22, 2025, FTA informed Metro that based on the project information submitted, the Project would require an EA to comply with NEPA.⁴ The Locally Preferred Alternative identified during the CEQA process, with refinements, is the Build Alternative for this EA.

⁴ Given the proposed alignment for the Build Alternative and results of technical studies conducted during the CEQA evaluation, it was determined that the evaluation of the Project would not require an EIS to comply with NEPA.

Eastside Transit Corridor Phase 2 Selection of Build Alternative and Screening Process



Source: Metro; CDM Smith/AECOM JV 2026.

Figure 2.1 Development of the Alternatives and Screening Process

2.2 No Build Alternative

The No Build Alternative evaluates the reasonably foreseeable effects within the Study Area, described in **Section 3.1.1**, if the Build Alternative were not approved. The No Build Alternative would maintain existing transit service through the year 2050. No new transportation infrastructure would be built within Los Angeles County aside from projects currently under construction or funded for construction and operation by 2050 via the 2008 Measure R or 2016 Measure M sales taxes. The No Build Alternative would include existing transit and roadway projects identified for funding in Metro’s 2020 L RTP and Southern California Association of Governments’ Connect SoCal 2024-2050 Regional Transportation Plan (2024 RTP). The No Build Alternative would include existing projects from the base year (2025) and planned regional projects in operation in the horizon year (2050). Planned regional transit projects assumed in operation by 2050 are included in **Table 2.1**. The No Build Alternative would not require any right-of-way acquisitions, beyond what is required for these existing and already planned projects, would incur no project costs, and would not require project funding.

The No Build Alternative is used for comparison purposes to assess the relative benefits and impacts of constructing a new transit project in the Study Area versus implementing only currently planned and funded projects. The No Build Alternative evaluates the reasonably foreseeable effects (Chapter 3.0) if the Build Alternative were not approved. The No Build Alternative is required for comparison under NEPA.

Table 2.1 Planned Regional Transit Projects Assumed to be in Operation by 2050

Regional Transit Project
Metro Foothill Extension, Glendora to Montclair
Metro Southeast Gateway Line, Los Angeles to Artesia
Metro Los Angeles International Airport/Metro Transit Center Station
Metro C Line (Green) Extension to Torrance
Metro Crenshaw/ Los Angeles International Airport Transit Project
Metro Vermont Transit Corridor Bus Rapid Transit
Metro D Line Subway Extension Project
Metro East San Fernando Valley Light Rail Transit Project
Metro G Line Improvements Project
North Hollywood to Pasadena Transit Corridor
Sepulveda Transit Corridor Project

Source: CDM Smith/AECOM JV 2026, Metro Gold Line Foothill Extension Construction Authority 2025.

The No Build Alternative would not provide a rail transit option for communities in eastern Los Angeles County and therefore would not satisfy the purpose of the Project. The No Build Alternative would not address growing population and employment densities, local and arterial roadway congestion, quality of life issues, or high transit demand in the Study Area; therefore, the No Build Alternative would not satisfy the Project need.

2.3 Build Alternative

The Build Alternative is an electric-powered light rail transit service extension in eastern Los Angeles County. It would consist of approximately 4.7 miles of reconfigured and new light rail transit guideway⁵ to extend the Metro E Line east from the current terminus at Atlantic Boulevard to an at-grade terminal station at the Greenwood station in the City of Montebello. The 4.7 miles would include reconfiguration of 0.4 mile of existing track for a transition to a new 4.3-mile extension. The configuration includes an approximately 3.1-mile underground guideway, 0.9-mile aerial guideway, and 0.7-mile at-grade guideway. It also includes a relocated underground Atlantic/Pomona station and three new stations. As described in **Section 2.3.3**, the Build Alternative would also include guideway and system facilities to support vehicle operations, such as overhead catenary systems, radio communications, and train control houses that would be constructed along the alignment; a modification to existing tracks west of the proposed alignment extension (Maravilla Crossover); and an MSF. Three site options for the MSF are being evaluated in this EA based on project requirements, constructability, environmental impacts, operational efficiency, and compatibility with surrounding land uses, but only one would be selected. Of the evaluated MSF site options, two are in the City of Montebello (MSF Sites 1 and 2) and one is in the City of Commerce (MSF Site 3). **Figure 2.2** shows the Study Area and the alignment with the locations of the proposed stations and MSF site options.

The Build Alternative would construct a light rail transit option for communities in eastern Los Angeles County, enhancing regional connectivity, supporting transit dependent populations, and serving high-density urban areas. The Build Alternative satisfies the purpose and need of the Project because it would expand transit opportunities in eastern Los Angeles County, provide a transportation alternative to local and arterial roadways during periods of congestion, improve quality of life by enhancing mobility and access options, and serve a population with high transit demand.

2.3.1 Guideway Alignment

The Build Alternative includes modifications to the existing Metro E Line tracks west of the existing East Los Angeles Civic Center Station and a new guideway extension that begins east of the station in East Los Angeles (unincorporated Los Angeles County).

The existing tracks would be reconfigured to install a new at-grade double crossover⁶ on 3rd Street between Arizona Avenue and Kern Avenue, as shown in **Figure 2.3**. The new crossover, referred to as the Maravilla Crossover, is required to meet operational requirements of the guideway extension. Construction of the Maravilla Crossover would involve a minor shift of the existing tracks to the east and roadway resurfacing within the existing right-of-way. A train control house with electric power switches and auxiliary power room would be constructed at the vacant lot owned by Metro on the south side of 3rd Street between Arizona Avenue and Mednik Avenue (see **Figure 2.3**). This site is adjacent to an existing traction power substation that is surrounded by a block wall. The block wall would be extended to include the train control house site.

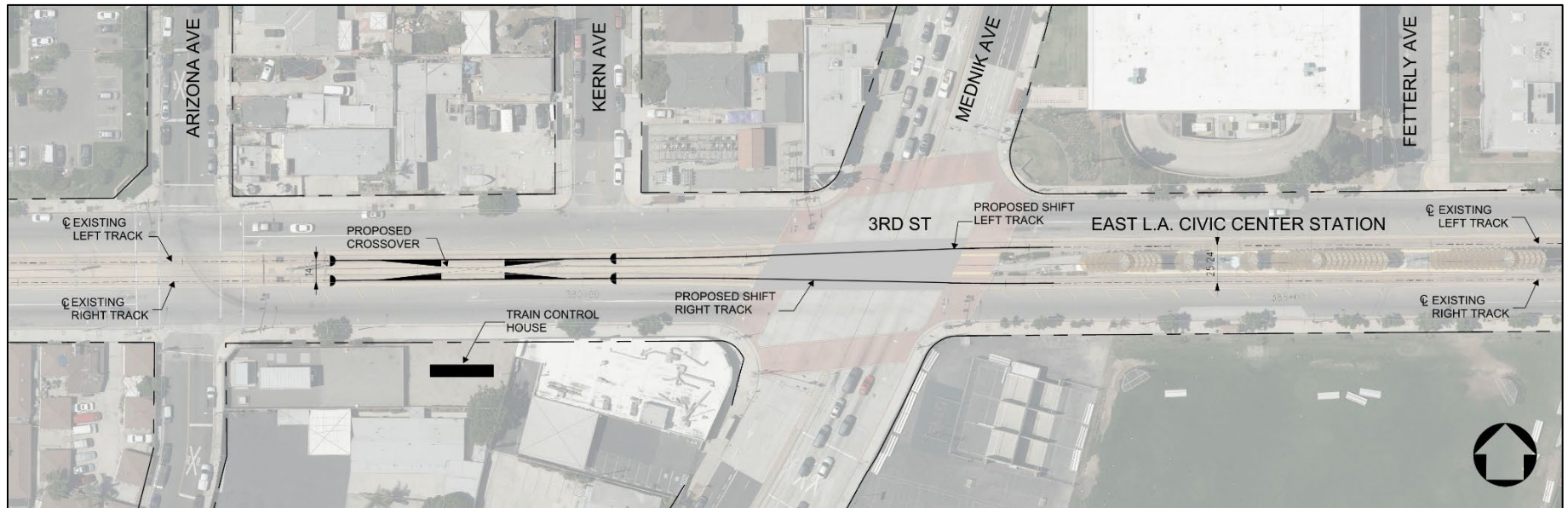
⁵ According to the FTA, a guideway refers to a public transportation facility using and occupying a separate right-of-way or rail line for the exclusive use of public transportation (FTA 2025). The Build Alternative guideway is the proposed rail line, including the underground, aerial, and at-grade configurations. The centerline refers to the center line between the guideway light rail transit tracks or structures that supports, contains, and physically guides the light rail transit vehicles.

⁶ Track crossovers allow a train to reverse direction and use adjacent track to continue operation. The Build Alternative includes the Maravilla Crossover and crossovers along the alignment extension as addressed in **Section 2.3.3**.



Source: Metro; CDM Smith/AECOM JV 2026.

Figure 2.2 Study Area and Build Alternative



Source: HNTB/Cordoba 2026.

Figure 2.3 Maravilla Crossover Exhibit

The new guideway would begin with a transition from the existing at-grade guideway to an underground guideway within an open trench extending from east of Civic Center Way to east of La Verne Avenue as shown in **Figure 2.4**. The trench would eliminate vehicle and pedestrian crossings of 3rd Street at La Verne Avenue and thus, left turns to and from La Verne Avenue would be prohibited during construction and operation of the Build Alternative. Left turns would also be eliminated at Civic Center Way; however, the pedestrian crosswalk at this location would remain. To facilitate traffic movement to and from La Verne Avenue and Civic Center Way, eastbound traffic on 3rd Street would be allowed to make a U-turn on Woods Avenue to reverse direction. Westbound traffic would continue to be allowed to make a U-turn at Mednick Avenue to reverse direction. Additionally, a new access road would be constructed to allow Sheriff's Department vehicles to turn left from the Sheriff's Department driveway onto 3rd Street. A new high-visibility crosswalk would provide pedestrian access across 3rd Street between the existing pedestrian access at Civic Center Way and Woods Avenue.

Once underground, the guideway would follow 3rd Street to the proposed relocated underground Atlantic/Pomona station located east of Beverly Boulevard. The underground guideway would then turn south, running east of Atlantic Boulevard until south of 4th Street and then underneath Atlantic Boulevard to approximately Verona Street and Olympic Boulevard. Then, the underground guideway would curve southeast, running under Smithway Street near the Citadel Outlets in the City of Commerce.

After crossing Saybrook Avenue, the guideway would transition from underground to an aerial configuration. If MSF Site 1 or 3 is selected, the aerial guideway would continue east and merge into the center of Washington Boulevard at Gayhart Street. However, if MSF Site 2 is selected, the aerial guideway would continue east immediately to the north of Washington Boulevard and merge into the center of Washington Boulevard east of Garfield Avenue.

Under all three MSF site options, the aerial guideway would transition to an at-grade configuration between Vail Avenue and Maple Avenue. The alignment would remain at-grade in the center of Washington Boulevard until the intersection of Washington Boulevard and Greenwood Avenue in the City of Montebello, where it would shift slightly south of the center of Washington Boulevard. Revenue service would terminate at Greenwood station to the west of Greenwood Avenue and tail tracks would continue further east to Montebello Boulevard to allow for the light rail transit to reverse direction. The guideway and trackwork design would comply with the Metro Rail Design Criteria.

2.3.1.1 Traffic Circulation Changes

Traffic circulation changes that would occur under the Build Alternative include removal of left turns at some signalized intersections and rerouting of traffic and reduction of traffic lanes. Left turns in and out of driveways along the at-grade portion of the guideway on Washington Boulevard would also be removed.

At the intersection of Washington Boulevard and Montebello Boulevard, removal of left turns is one of two options being considered:

- Montebello Boulevard Option 1 (no left turn) – This option would remove left-turn pockets on Washington Boulevard, eliminating left-turns onto Montebello Boulevard from both directions. Only through traffic movement and right turns would be allowed from Washington Boulevard at this intersection.
- Montebello Boulevard Option 2 (left-turn pockets) – This option would retain left-turn pockets on Washington Boulevard for traffic in both directions. This option would require widening of Washington Boulevard and involve additional property acquisitions.

Additionally, to accommodate the traffic circulation changes, at-grade light rail transit movements, at-grade and aerial guideway, and pedestrian access to and from stations, minor changes, such as lane re-striping and new or modified traffic signals, and driveway widening at some industrial properties along Washington Boulevard may be required. Primary circulation changes, including removal of left turns and traffic circulation changes, are identified in **Table 2.2**. Lane reductions are identified in **Table 2.3**.



Source: HNTB/Cordoba 2026.

Figure 2.4 Conceptual 3rd Street Modifications

Table 2.2 Left Turns Eliminated and Circulation Changes

Intersection Location	Left Turn Removed	Circulation Change	Reason for Change
3rd Street and Civic Center Way	Civic Center Way onto eastbound 3rd Street	Left turn traffic from Civic Center Way rerouted to Mednick Avenue	Required to maintain California Public Utilities Commission rail crossing safety due to the construction of the Build Alternative trench
3rd Street and Civic Center Way	Eastbound 3rd Street onto Civic Center Way	Left turn traffic from eastbound 3rd Street onto Civic Center Way rerouted to Mednick Avenue intersection with Civic Center Way	Required to maintain California Public Utilities Commission rail crossing safety due to the construction of the Build Alternative trench
3rd Street and La Verne Avenue	Westbound 3rd Street onto La Verne Avenue	Left turn traffic from westbound 3rd Street onto La Verne Avenue rerouted to U-turn or left turn at Mednick Avenue	Accommodate the open trench
3rd Street and La Verne Avenue	La Verne Avenue onto westbound 3rd Street	Left turn traffic from La Verne Avenue onto westbound 3rd Street rerouted to a U-turn at Woods Avenue	Accommodate the open trench
3rd Street and La Verne Avenue	Not applicable	Sheriff's Department access road improved via a new designated left turn movement from the existing Sheriff's Department driveway	Accommodate the open trench and maintain emergency vehicle access from Sheriff's Driveway
Washington Boulevard and Maple Avenue	Eastbound and westbound Washington Boulevard onto Maple Avenue	Left turn traffic traveling along Washington Boulevard rerouted from Maple Avenue to Vail Avenue.	Accommodate the proposed retaining wall where the aerial guideway transitions to at-grade
Washington Boulevard between Vail Avenue and Montebello Boulevard	Private driveways from the eastbound and westbound Washington Boulevard.	Left turn traffic turning into private driveways from the eastbound and westbound Washington Boulevard center median rerouted to nearby street intersections.	To allow for center-running at-grade guideway
<i>Montebello Boulevard Option 1:</i> Washington Boulevard and Montebello Boulevard	Left turns eliminated from eastbound and westbound Washington Boulevard onto Montebello Boulevard	Left turn traffic traveling along Washington Blvd rerouted from Montebello Boulevard to Greenwood Avenue and Bluff Road.	Accommodate the proposed at-grade guideway and minimize right-of-way impacts since left turn traffic volumes were low at Montebello Boulevard

Source: Metro; HNTB/Cordoba 2026.

Table 2.3 Lane Reduction

Intersection Location	Lane Reduction	Reason for Elimination
Eastbound 3rd Street between Civic Center Way and new Sheriff's Department access road	Reduction from two through lanes to one through lane	To allow for track lowering and ensure pedestrian crossing safety
Washington Boulevard between Saybrook Avenue and Carob Way	Reduction from three through lanes to two through lanes	To allow for center-running aerial and at-grade guideway

Source: Metro; HNTB/Cordoba 2026.

2.3.2 Proposed Stations

Table 2.4 provides a summary of the proposed stations for the Build Alternative. The locations of the stations are shown in **Figure 2.2** and conceptual station site plans are shown in **Figure 2.5** through **Figure 2.8**. Station features would include, but would not be limited to: station signs, entrance portal canopies at the underground stations, platform canopies at the at-grade station, plaza paving and landscaping, interior architectural finishes and furnishings, lighting, passenger telephones, sound attenuation features, customer information panels, real-time information digital screens, fare gates, fare vending machines, integrated public art, security cameras, and bike racks and lockers. Station entry portals with escalators and elevators would provide access to underground stations. Access to all stations would be compliant with the Americans with Disabilities Act and would have bicycle and pedestrian connections. Details, including station area planning and urban design, would be determined during the Build Alternative's final design phase in compliance with Metro design standards and policies for Metro rail stations. In coordination with Metro Art, efforts would be made, as feasible, to relocate existing artwork from the Atlantic Station to the new Atlantic/Pomona station.

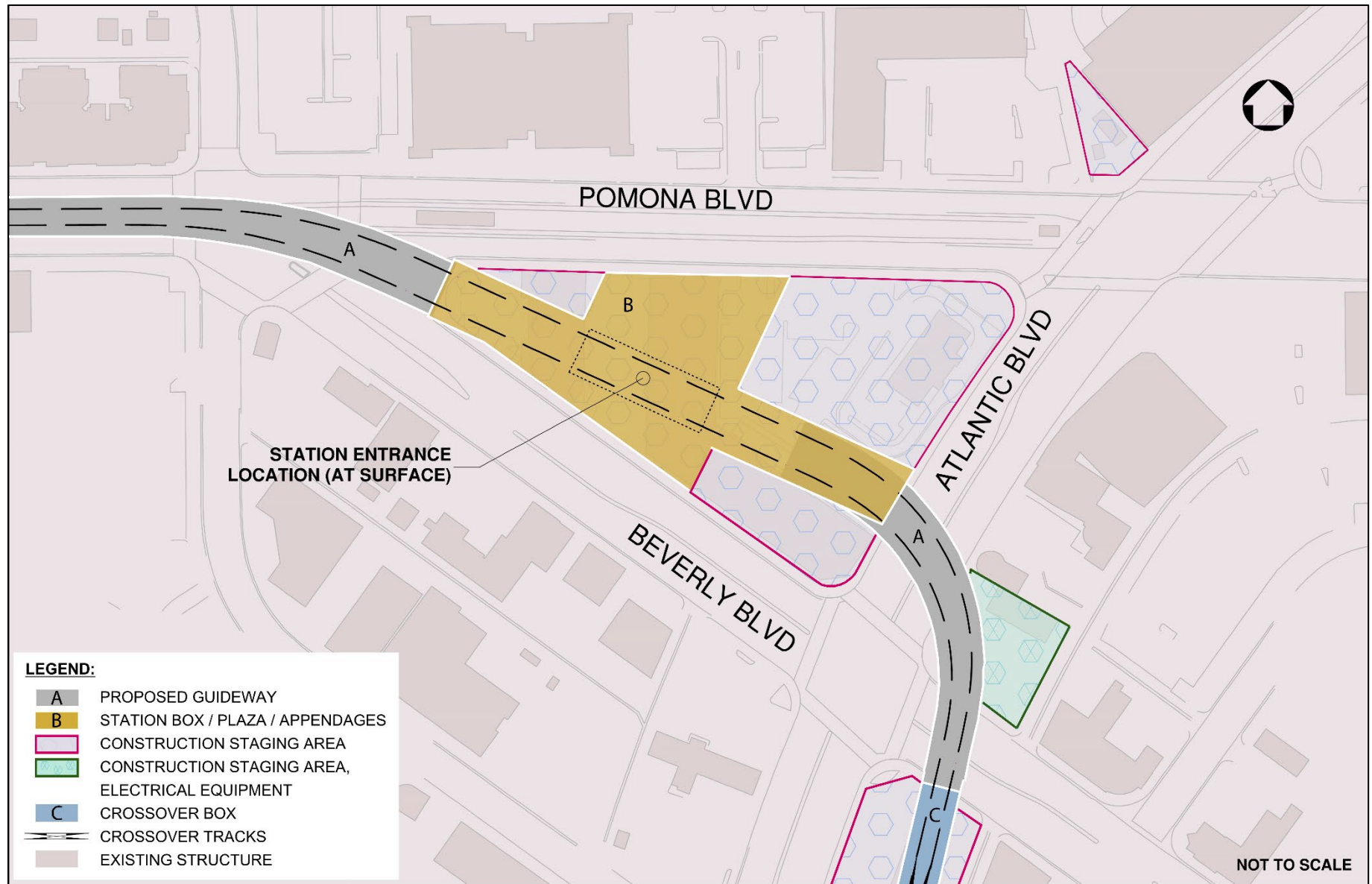
Table 2.4 Proposed Stations for the Build Alternative

Proposed Station	Station Location	Jurisdiction	Station Configuration	Platform Configuration	Parking Provided?
Atlantic/Pomona ¹	Triangular parcel bounded by Atlantic Boulevard, Pomona Boulevard, and Beverly Boulevard	East Los Angeles (unincorporated Los Angeles County)	Underground	Center Platform	Yes, 280 existing parking spaces in the structure north of Pomona Boulevard/ Atlantic Boulevard
Atlantic/Whittier	Atlantic Boulevard/ Whittier Boulevard Intersection	East Los Angeles (unincorporated Los Angeles County)	Underground	Center Platform	No
Commerce/Citadel	Beneath Smithway Street and the Citadel Outlets	City of Commerce	Underground	Center Platform	No
Greenwood	Washington Boulevard west of Greenwood Avenue	City of Montebello	At-grade	Center Platform	Yes, 270-370 proposed new surface parking spaces near Greenwood Avenue/ Washington Boulevard

Source: Metro; CDM Smith/AECOM JV 2026.

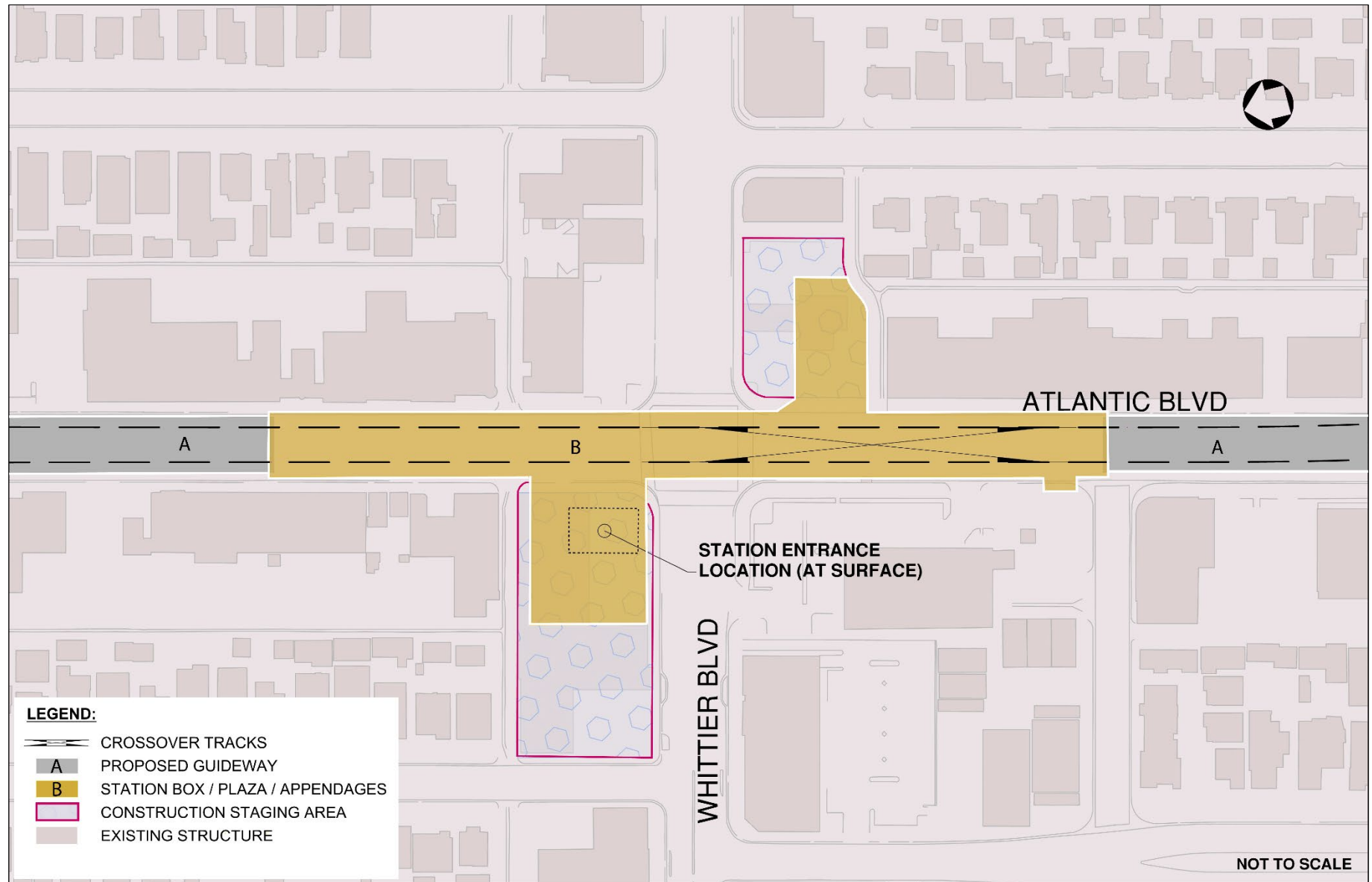
Note:

¹ The existing Atlantic Station would be demolished and the existing traction power substation would be reconfigured and updated to meet underground station requirements.



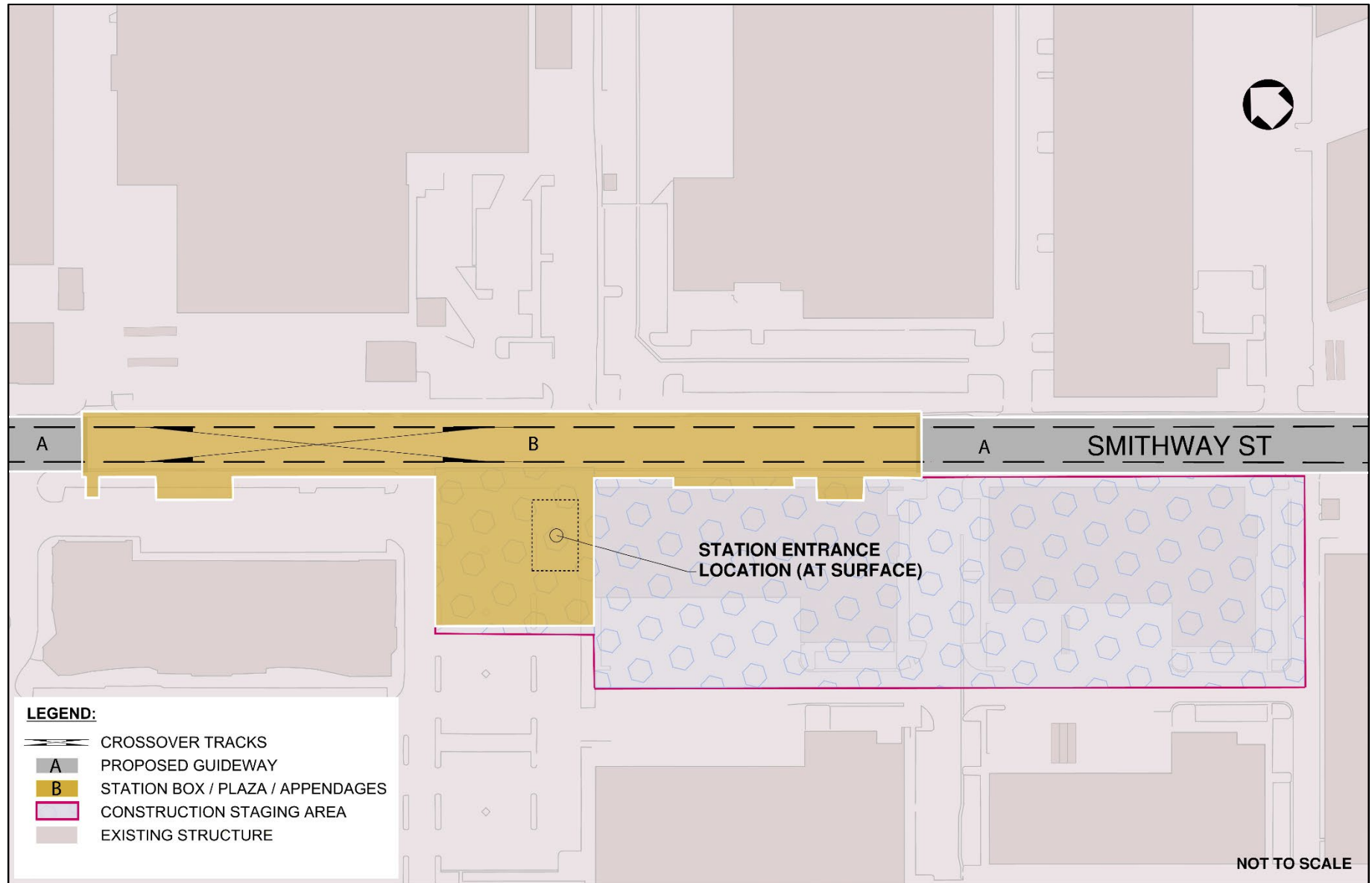
Source: HNTB/Cordoba 2026.

Figure 2.5 Atlantic/Pomona Station Conceptual Site Plan



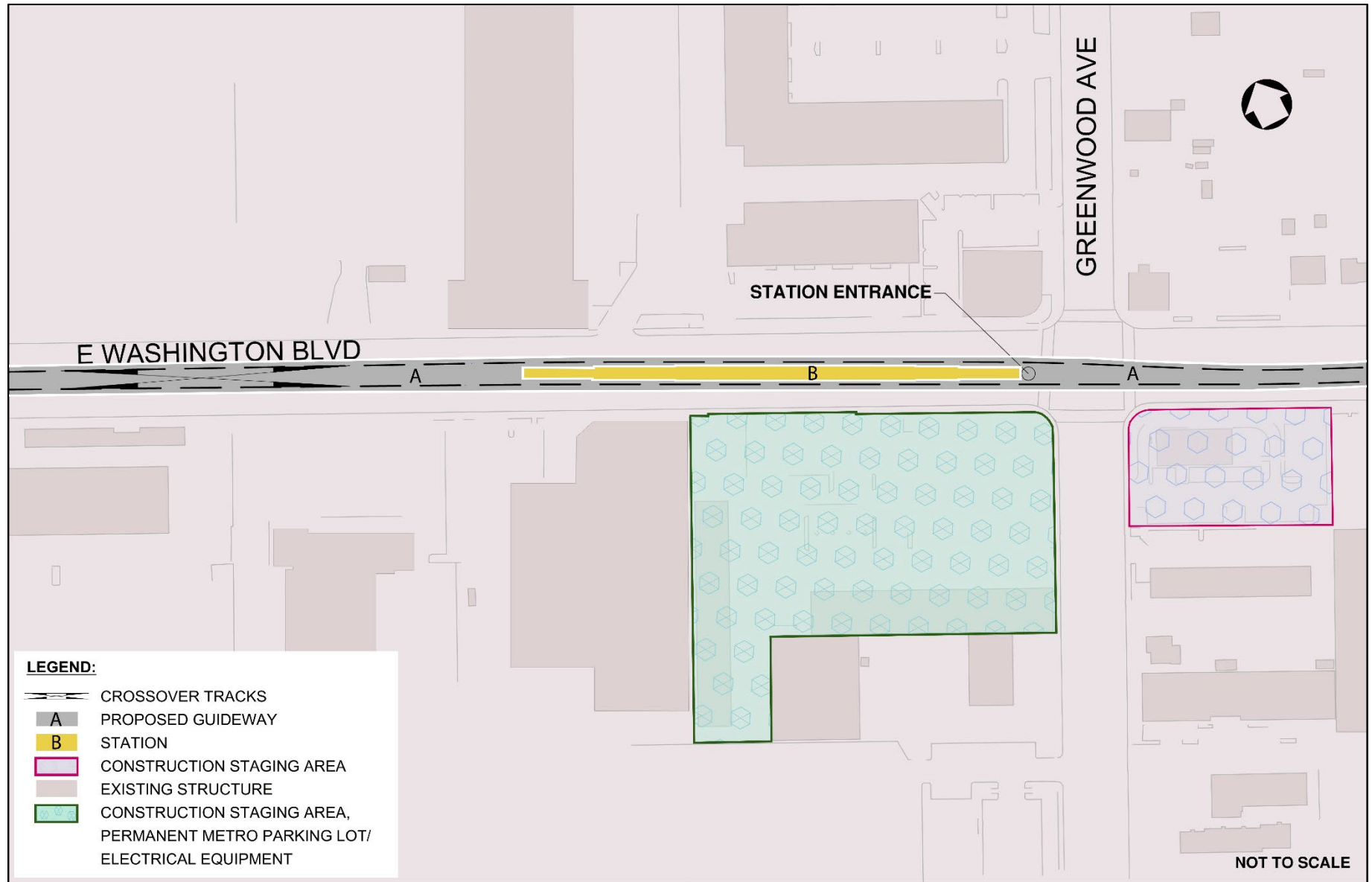
Source: HNTB/Cordoba 2026.

Figure 2.6 Atlantic/Whittier Station Conceptual Site Plan



Source: HNTB/Cordoba 2026.

Figure 2.7 Commerce/Citadel Station Conceptual Site Plan



Source: HNTB/Cordoba 2026.

Figure 2.8 Greenwood Station Conceptual Site Plan

2.3.3 Guideway and Systems Facilities

The Build Alternative would include additional elements to support vehicle operations, including but not limited to the overhead catenary system, tracks, crossovers, cross passages, ventilation structures, emergency fire exits, traction power substations, train control houses with electric power switches and auxiliary power rooms, radio communications, and an emergency generator as described in **Table 2.5**, and the MSF described in **Section 2.3.4**. The precise location of these facilities would be determined in a subsequent design phase.

Table 2.5 Additional Elements Supporting Build Alternative Operations

Element	Description
Overhead Catenary System	Network of overhead wires that distribute electricity to the light rail transit (Figure 2.9). Includes steel poles to support an electrical power line that would be suspended above the light rail transit tracks. A pantograph or “arm” on the roof of light rail transit vehicles would slide along the underside of the contact wire and deliver electric power to the vehicles. Overhead catenary system poles would be approximately 30 feet tall and typically located every 90 to 170 feet between two light rail transit tracks.
Overhead Conductor Rails	Network of overhead rails that distribute electricity to the light rail transit in the underground portion of the guideway. Overhead conductor rails would power the light rail transit similar to the overhead catenary system (see description of Overhead Catenary System); however, overhead rails would be hung from the tunnel ceiling.
Tail Tracks	Tracks that extend beyond the revenue service tracks to allow for reversing direction. Tail tracks for the Build Alternative would be located at the end-of-the-line ending at Montebello Boulevard.
Crossovers	Track crossovers that allow a train to reverse direction and use adjacent track to continue operation. The Build Alternative includes the Maravilla Crossover and crossovers along the alignment extension, generally near the proposed stations (see Table 2.6).
Cross Passages	Short tunnel segments that connect two parallel tunnels in underground segments and allow emergency access from one tunnel to another. Cross passages for the Build Alternative would be approximately 15 feet high and 10 feet wide and located about every 750 to 800 feet along tunnel alignments.
Ventilation Structures	Ventilation structures allow for climate control and emergency ventilation of tunnels and underground stations. Ventilation gratings would be located on sidewalks (or other public areas), typically on both sides of all underground stations.
Emergency Fire Exits	Emergency fire exits to the surface for rail staff and passenger egress and emergency personnel access would be installed along the tunnel portion of the alignment as required by the current version of Metro’s Fire Life Safety Criteria. Exits would typically be a vertical exit door at a surface building or surface level hatch.
Traction Power Substations	Electrical substations that would typically be placed every 1 to 1.5 miles along the alignment and at the MSF to provide electrical power for light rail transit vehicles (see Figure 2.10). Location would be at points along the alignment where maximum power draw is expected (such as stations and inclines). Size of each traction power substations unit would be approximately 60 feet by 80 feet and 12 to 14 feet high. Traction power substations would feed power to the overhead catenary system through underground feeders in duct banks and up a pole to a connection with the contact wire. Traction power substations may be located underground at underground stations, within the public right-of-way, in parking facilities, or on acquired parcels. For the purposes of the EA, potential traction power substations locations were evaluated and are included in Table 2.7 .

Element	Description
Radio Communications	Equipment used to receive, process and transmit communication signals would require antenna structures that are approximately 70 to 80 feet tall. A distributed antenna system is used to allow wireless signal coverage for cellular service and wi-fi in otherwise unserviceable areas, such as the underground stations and tunnels; it places several smaller, less-powerful antennas in different locations instead of one large, powerful antenna. Pole height is subject to the total number of required radio channels and bands. Communication cables would connect the antennas to the station train control and communications rooms. Antennas may be located near stations and at the MSF. At the Commerce/Citadel station, an aboveground outdoor shelter may be required if the underground control room cannot support additional equipment.
Train Control House and Electrical Power Switches	The train control house contains signal equipment and electric power switches (housed in metal, box-like enclosures) that transfer electric power from utility providers to underground traction power and other rail systems. Communications and electrical power switches would be located at each station. For the purposes of the EA, the potential train control house locations were evaluated and are included in Table 2.7 .
Emergency Generator	Serves as a secondary source of electrical power when the primary power supply is disrupted.

Source: Metro; CDM Smith/AECOM JV 2026.



Source: Metro 2021.

Figure 2.9 Metro Overhead Catenary System for Light Rail Transit Vehicles

Table 2.6 Crossover Locations

Number	General Area	Location	Guideway	Crossover Type
1	West of East Los Angeles Civic Center Station	Along the existing Metro E Line on 3rd Street between Arizona Avenue and Mednik Avenue (referred to as the Maravilla Crossover)	At-Grade	Double Crossover
2	Atlantic/Pomona Station	Beverly Boulevard and Via Corona Street	Underground	Double Crossover
3	Atlantic/Whittier Station	South of the proposed station, at the intersection of Whittier Boulevard and Atlantic Boulevard	Underground	Double Crossover
4	Commerce/Citadel Station	West of the station within Smithway Street	Underground	Double Crossover
5 ¹	Saybrook Avenue	East of Saybrook Avenue	Underground	Single Crossover
6 ²	Yates Avenue (MSF Sites 1 and 3) Garfield Avenue (MSF Site 2)	East of intersection of Yates Avenue and Washington Boulevard (MSF Site 1 or 3) East of Garfield Avenue and Washington Boulevard (MSF Site 2)	Aerial	Double Crossover
7	Maple Avenue	East of Maple Avenue and Washington Boulevard intersection	At-Grade	Double Crossover
8	Greenwood Avenue	East of intersection of Greenwood Avenue and Washington Boulevard	At-Grade	Double Crossover

Source: Metro; HNTB/Cordoba 2026.

Note:

¹ This crossover would accommodate moves in and out of the MSF Site 3 and is only required for MSF Site 3.

² This crossover would be in the aerial guideway section of the alignment for all MSF options; however, the location changes slightly depending on which MSF site option is selected.



Source: Metro Gold Line Foothill Extension Construction Authority 2012.

Figure 2.10 Typical Light-Rail Traction Power Substations

Table 2.7 Traction Power Substations and Train Control House Locations

Element	General Area	Location	Type
Traction Power Substation	Atlantic/Pomona Station	Corner of Atlantic Boulevard and Beverly Boulevard	Surface
Traction Power Substation	Atlantic/Whittier Station	Within the Atlantic/Whittier station	Underground
Traction Power Substation	Commerce/Citadel Station	Within the Commerce/Citadel station	Underground
Traction Power Substation	Gayhart Street	Near Gayhart Street and Washington Boulevard	Surface
Traction Power Substation	Maple Avenue	East side of Maple Avenue south of Washington Boulevard	Surface
Traction Power Substation	Greenwood Avenue	Southwest corner of the Greenwood station site	Surface
Train Control House	West of East Los Angeles Civic Center Station	At site of an existing traction power substation on the southeast corner of 3rd Street and Arizona Avenue	Surface
Train Control House	Atlantic/Pomona Station	Within Atlantic/Pomona station	Underground

Element	General Area	Location	Type
Train Control House	Atlantic/Whittier Station	Within Atlantic/Whittier station	Underground
Train Control House	Commerce/Citadel Station	Within Commerce/Citadel station	Underground
Train Control House	Gayhart Street	Near Gayhart Street and Washington Boulevard, collocated with a traction power substation	Surface
Train Control House	Yates Avenue	Yates Avenue: - MSF Site 1 or MSF Site 2: on private property identified for MSF - MSF Site 3: within the median of Washington Boulevard east of Yates Avenue beneath the aerial guideway	Surface (applies to all MSF site options)
Train Control House	Maple Avenue	East side of Maple Avenue south of Washington Boulevard, collocated with a traction power substation	Surface
Train Control House	Greenwood Avenue	Southwest corner of the Greenwood Station site, collocated with a traction power substation	Surface

Source: Metro; HNTB/Cordoba 2026.

2.3.4 Maintenance and Storage

The Build Alternative would include equipment and facilities for cleaning and maintenance of rail cars and to store vehicles that are not in service. This would be supported by a new MSF that would be constructed in an industrial zone in the City of Montebello or in the City of Commerce.

Three site options for the MSF are evaluated in this EA, including two site options in the City of Montebello (MSF Sites 1 and 2) that would include facilities for repairing rail cars and one site option in the City of Commerce (MSF Site 3) that would not include repair facilities. Only one of the three sites would be selected and constructed. MSF Sites 1 and 2 would be located north of Washington Boulevard and south of Flotilla Street. MSF Site 1 would be located west of Vail Avenue with mid-block yard lead tracks and MSF Site 2 would be located west of MSF Site 1, with yard lead tracks on Yates Avenue. MSF Site 3 would be located west of MSF Sites 1 and 2, at the tunnel boring machine launch site at Gayhart Street east of Saybrook Avenue. The yard lead tracks for MSF Sites 1 and 2 would connect to the mainline alignment in an aerial configuration and transition to at-grade as the track approaches the MSF. Tracks into MSF Site 3 would connect to the mainline alignment at-grade as the underground alignment transitions to the aerial alignment.

Table 2.8 provides additional information on MSF Sites 1, 2, and 3. **Figure 2.11** shows the location of the three MSF site options and **Figure 2.12**, **Figure 2.13**, and **Figure 2.14** show conceptual layouts of MSF Sites 1, 2, and 3, respectively.

Table 2.8 MSF Sites 1, Site 2, and Site 3 Comparison

Element	MSF Site 1: Mid-Block Yard Lead Tracks	MSF Site 2: Yates Avenue Yard Lead Tracks	MSF Site 3: Satellite Yard at Gayhart Street
MSF Operation	- Provide equipment and facilities to clean, maintain, and repair rail cars, tracks, and other system components and enable storage of light rail vehicles that are not in service and Metro's highway and railway (hi-rail) service vehicles - Provide office space for Metro staff, including rail operation and administrative staff	Same as MSF Site 1	Same as MSF Site 1, except would not provide equipment and facilities for repairing rail cars and storage area for light rail vehicle would be reduced
MSF Features	Rail yard, maintenance facility, administrative offices, paint and body shop, maintenance of way shop, cleaning platform and train wash, storage, traction power substations, equipment shelter, radio antenna, and parking	Same as MSF Site 1	Same as MSF Site 1, but would not provide paint and body shop, or maintenance of way shop
MSF Location	West side of Vail Avenue between Flotilla Street and Washington Boulevard	One parcel along the south frontage of Flotilla Street between Yates and Vail Avenues, one adjacent parcel immediately to the south, east of Yates Avenue	South of Gayhart Street, east of Saybrook Avenue
MSF Jurisdiction	City of Montebello	City of Montebello (yard lead tracks are in City of Commerce)	City of Commerce
MSF Connection to the Main line Alignment	Aerial yard lead tracks mid-block west of Vail Avenue with wye junction ¹ at the mainline alignment	Aerial yard lead tracks on Yates Avenue with wye junction ¹ at the mainline alignment Yates Avenue would retain one vehicle lane in both directions	Direct at-grade track connection to the mainline alignment in the light rail vehicle right-of-way east of Saybrook Avenue
MSF Size (in acres)	25 ²	28 ²	9
Full Property Acquisition for the MSF and Yard Lead Tracks	5	7	5 (parcels would also be used for transition from tunnel to aerial tracks, construction staging, and launching of the tunnel boring machine)
Partial Property Acquisitions for the MSF and Yard Lead Tracks	2	10	0

Element	MSF Site 1: Mid-Block Yard Lead Tracks	MSF Site 2: Yates Avenue Yard Lead Tracks	MSF Site 3: Satellite Yard at Gayhart Street
Additional Partial Property Acquisitions Needed for the MSF ³	Yes	Yes	No
Street Vacation Needed	Yes	No	No
Light Rail Vehicle Storage Capacity at the MSF	84	84	39
Employee Parking Stalls at the MSF	204 (6 Americans With Disabilities Act parking)	255 (7 Americans With Disabilities Act parking)	62 (3 Americans With Disabilities Act parking)
Additional Design Elements for the MSF	▪ Partial vacation of Acco Street to accommodate yard lead tracks ○ Elimination of through-access from Yates Avenue to Vail Avenue ○ Addition of cul-de-sac west of lead tracks to provide access to businesses from Yates Avenue ▪ Main line alignment in the median near Garfield Avenue	▪ Two aerial easements required from Burlington Northern Santa Fe (BNSF) Railway ▪ Main line alignment north of Washington Boulevard near Garfield Avenue	Main line alignment in the median near Garfield Avenue

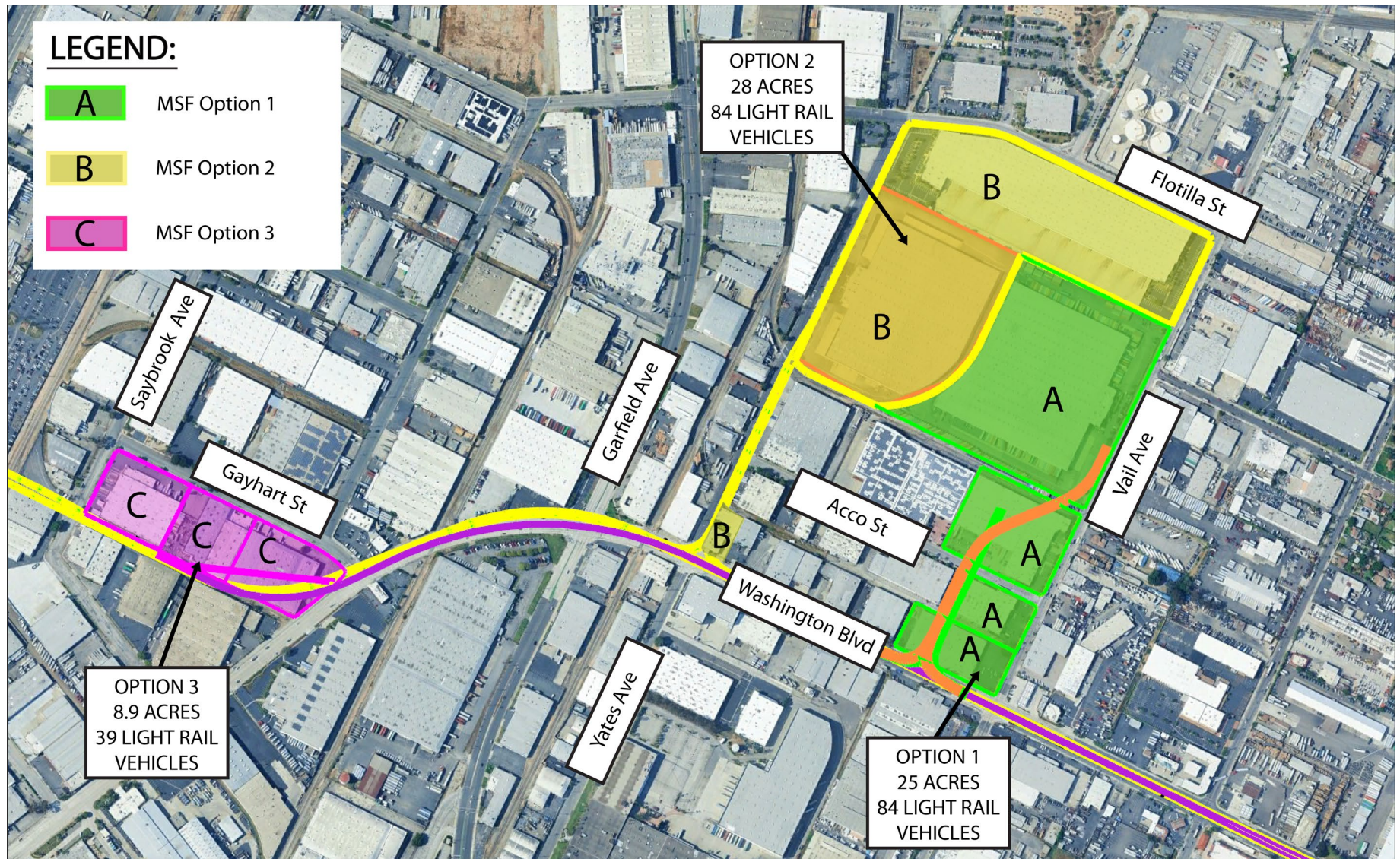
Source: Metro; CDM Smith/AECOM JV 2026.

Notes:

¹ A wye junction is the joining of three track segments.

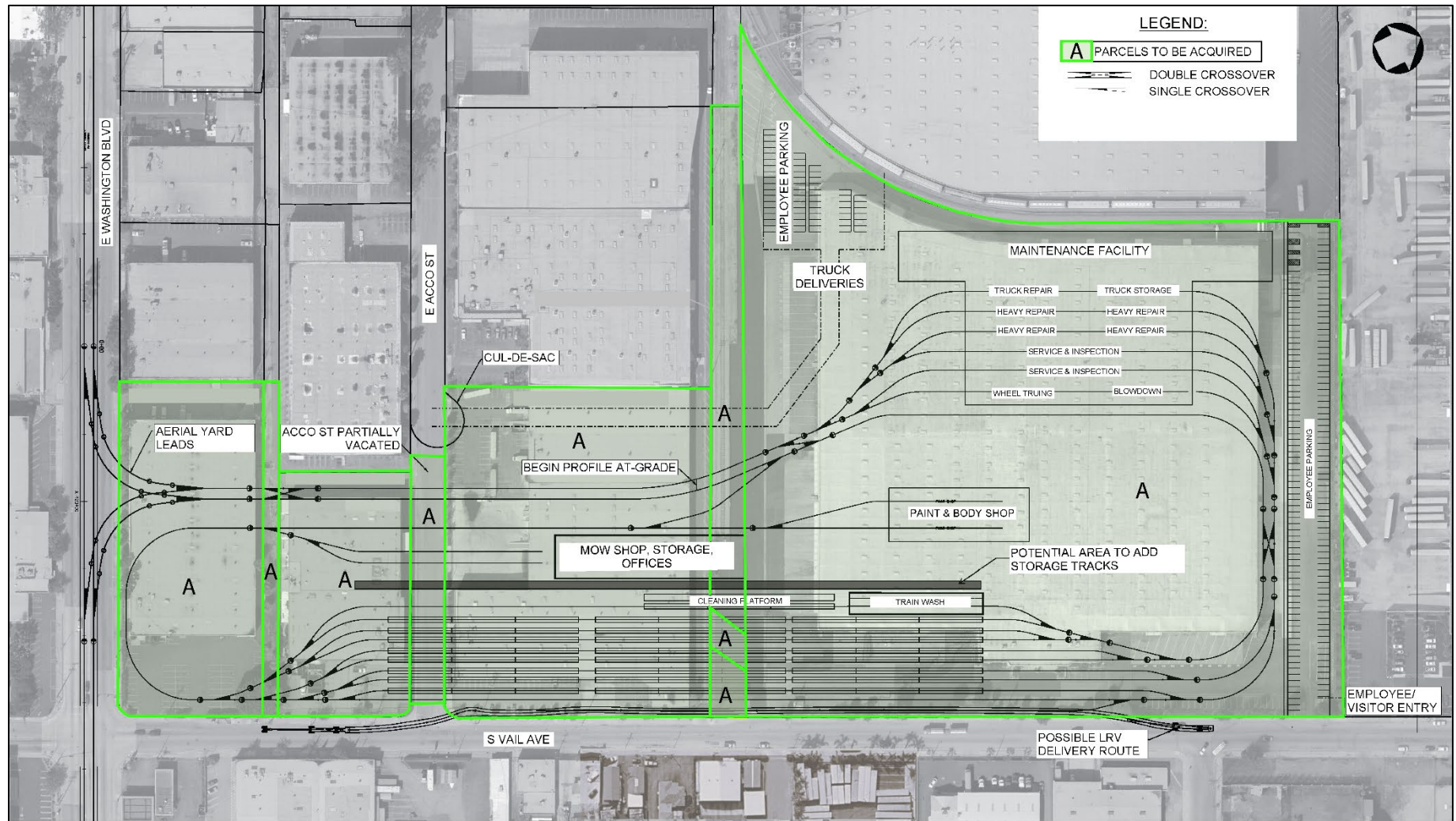
² Additional acreage would be needed to accommodate the wye junction, lead tracks, and construction staging

³ Indicates if partial property acquisitions would be needed in addition to full property acquisitions for construction and operation of the MSF site and guideway.



Source: HNTB/Cordoba 2026.

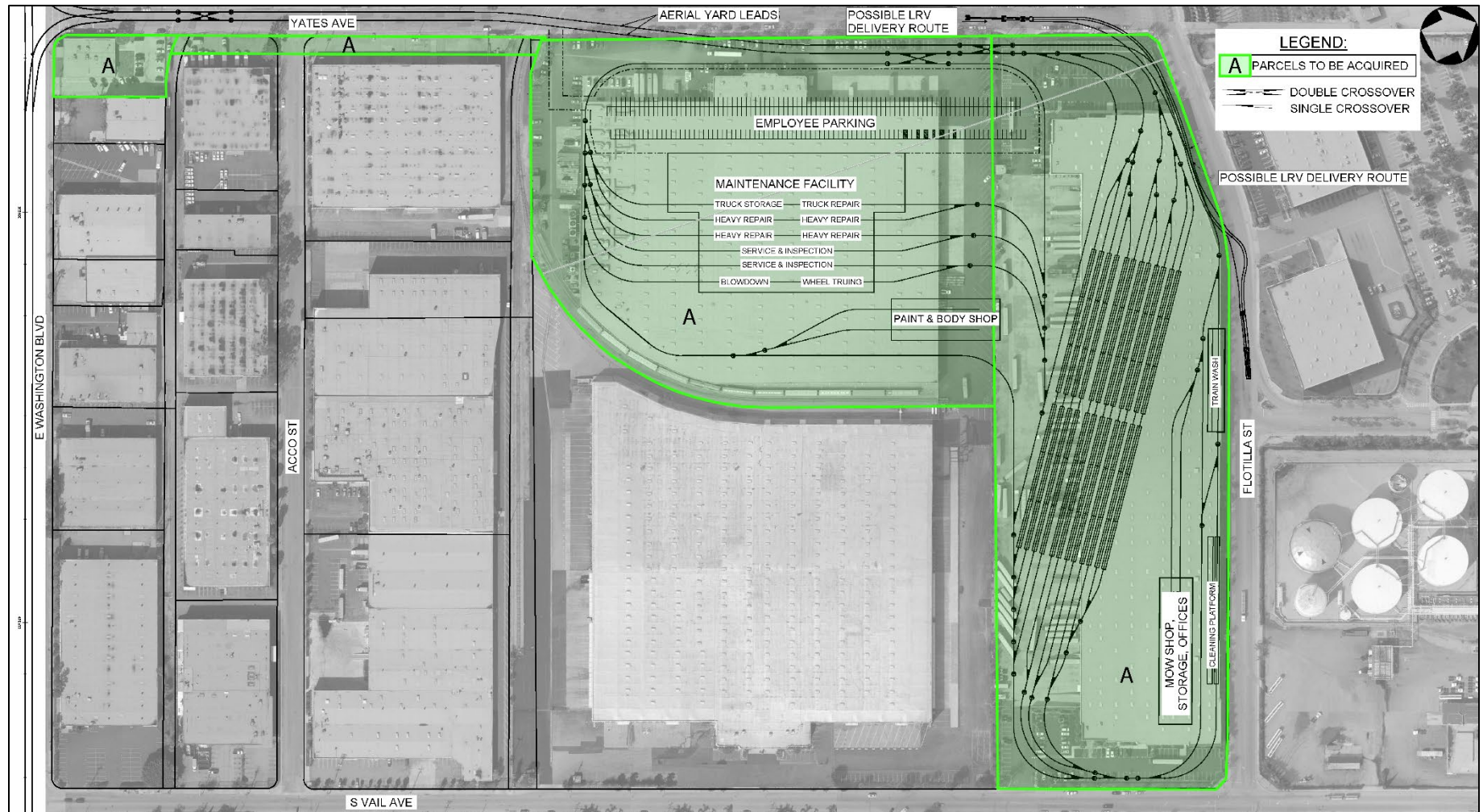
Figure 2.11 Maintenance and Storage Facility Site Options



Source: HNTB/Cordoba 2026.

Key: LRV = Light Rail Vehicle; MOW = Maintenance of Way

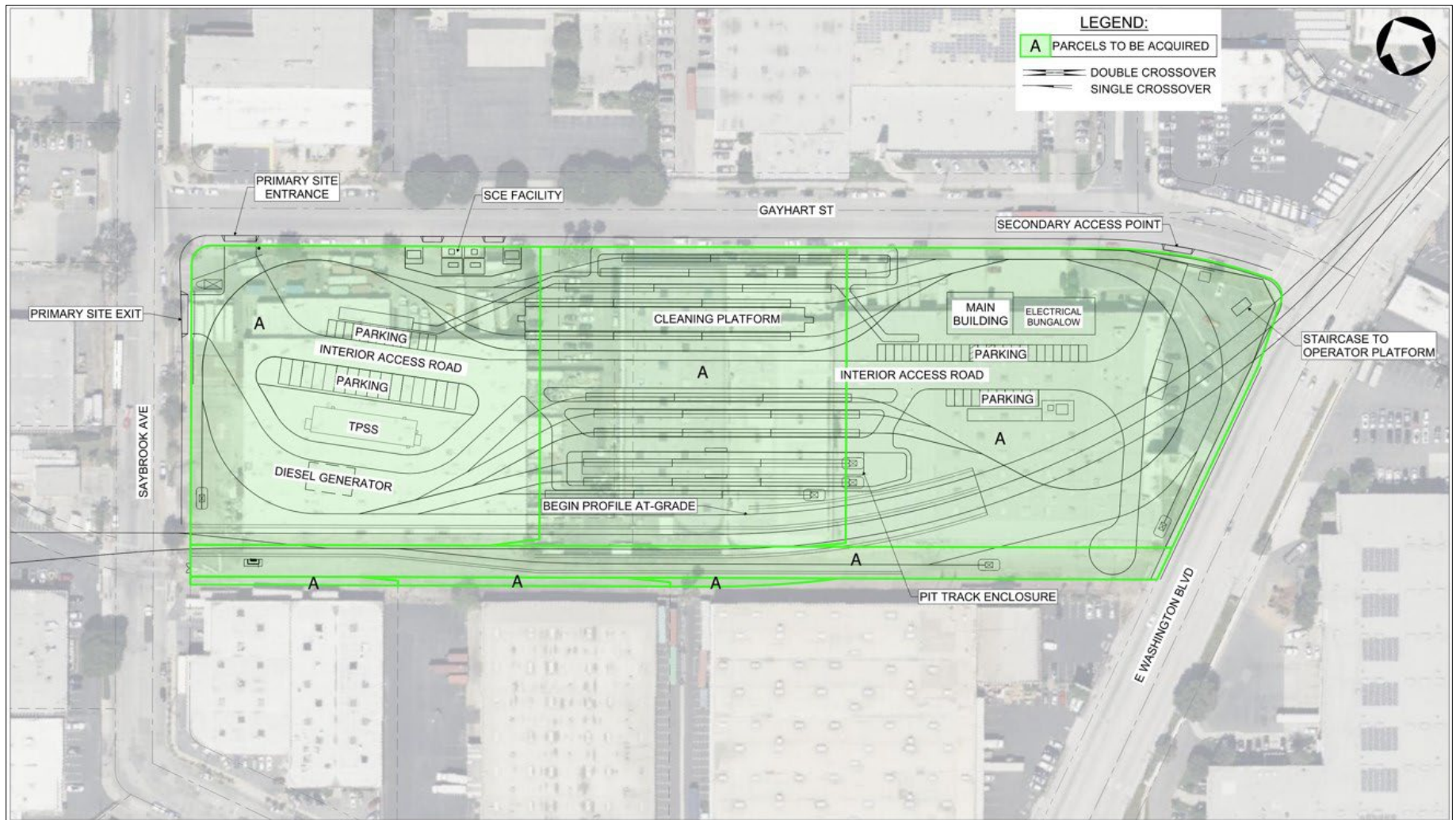
Figure 2.12 Maintenance and Storage Facility Site 1



Source: HNTB/Cordoba 2026.

Key: LRV = Light Rail Vehicle; MOW = Maintenance of Way

Figure 2.13 Maintenance and Storage Facility Site 2



Source: HNTB/Cordoba 2026.

Key: LRV = Light Rail Vehicle; SCE = Southern California Edison; TPSS = traction power

Figure 2.14 Maintenance and Storage Facility Site 3

2.3.5 Construction

The Build Alternative would include the construction of an underground, aerial, and at-grade guideway for light rail transit. Key construction activities associated with the guideway construction (at-grade, aerial, underground) would include temporary roadway decking for the cut and cover sections and tunnel boring for the underground guideway. Additional activities would include underground and at-grade station construction, demolition, utility relocations, street improvements (such as sidewalk reconstruction and traffic signal installation), retaining walls, and light rail transit operating systems installation including traction power substations and overhead catenary system. The Build Alternative would also include construction of a parking lot, other railroad system facilities, the Maravilla Crossover and other crossovers along the alignment, potential street widening, and the MSF. Utility relocation work would generally occur within the affected right-of-way and on adjacent and nearby streets.

Table 2.5 provides a description of typical construction activities to support at-grade, aerial, and underground light rail transit construction, including detail on the activity, typical duration, and equipment required. This table summary is meant to be representative, not all inclusive.

In addition to compliance with regulatory requirements, the development of the Build Alternative would employ conventional construction methods, techniques, and equipment. All work for development of the light rail transit system would conform to accepted industry specifications and standards, including best management practices. Build Alternative engineering and construction would, at minimum, be completed in conformance with applicable regulations, guidelines, and criteria. Cooperation with the corridor cities and Los Angeles County would occur throughout the construction process.

Applicable regulations, guidelines, and criteria would include, but not be limited to, Metro Rail Design Criteria, Architectural Standard and Directive Drawings, California Public Utilities Commission regulations, California Building Code, Metro Operating Rules, Metro Sustainability Principles, and Metro standard and directive drawings from other engineering disciplines as needed.

Build Alternative construction is anticipated to last approximately 60 to 84 months. Construction activities for the at-grade alignment, aerial alignment, and underground alignment would occur simultaneously. The construction of the underground stations is anticipated to take 36 to 48 months, while the construction of the at-grade station is expected to last approximately 12 to 18 months, as shown in **Table 2.9**. Most construction activities would occur during daytime hours. For specialized construction tasks (e.g., tunnel boring machine tunneling), it may be necessary to work during nighttime hours to minimize traffic disruptions and disruptions to businesses and other land uses along the alignment. Traffic control and pedestrian control during construction would follow local jurisdiction guidelines and the Manual of Uniform Traffic Control Devices standards. Standard traffic control methods and devices would be used, including the use of signage, roadway markings, flagging, and barricades to regulate, warn, or guide road users. Laydown and storage areas (staging area) for construction equipment and materials would be in the vicinity of the Build Alternative within parking facilities, and/or on parcels that would be acquired for the proposed stations and the MSF.

Table 2.9 Summary of Construction Activities for the Build Alternative

Alignment	Activity	Typical Duration (Total Months)	Description	Equipment Required
At-Grade Alignment	Utility Relocation	16-24	Relocate utilities from temporary and permanent elements related to the construction and/or operation of the Build Alternative.	Saw cutter, backhoes, jackhammers, excavators, hydro excavation trucks, dump trucks, cement trucks, asphalt pavers, forklift, manlift, cranes, bucket trucks, cable-pull trucks
At-Grade Alignment	Construction Staging Laydown Yard	3-6	Demolish existing buildings to store construction equipment and materials including the tunnel boring machines, office space, and preparation for the MSF.	Bulldozer, excavators, dump trucks, backhoes
At-Grade Alignment	Roadway	12-36	Reconfigure roadway, demolition of existing roadway, installation of curb and gutter, and other public right-of-way improvements. Install relocated traffic signals and stripe roadway.	Excavators, backhoes, compactors, milling machines, jackhammers, asphalt pavers, pavement breakers, manlifts, forklifts, dump trucks, cement trucks, road-stripping trucks
At-Grade Alignment	Guideway	24	Install slab and embedded track.	Forklift, dump trucks, excavators, cement trucks, rail installation equipment, and truck mounted welders
At-Grade Alignment	Station Construction	12-18	Excavate and grade to the bottom of the station elevation. Install mechanical, electrical, and plumbing. Form foundation, platform, structural components, and train control and communications room; install rebar, and pour concrete. Install canopies, faregates, ticketing, finishes, stairs, walkways, and station artwork.	Forklifts, generator sets, loaders, welders, cement trucks, cranes, manlifts
At-Grade Alignment	Light Rail Transit Systems Installation	14-24	Install overhead catenary system, overhead catenary system electrical and communication ducts, overhead catenary system foundations, traction power substations, and train control and communications equipment and bungalows.	Excavators, backhoes, forklifts, Hi-Rail vehicles, cranes, manlifts
At-Grade Alignment	Parking Lot	3-6	Demolition of existing pavement, grade, form and pour hardscape, pave parking facility, install irrigation, plant landscaping.	Forklifts, cement trucks, pavement breakers, diamond saws, compressors, paving machines, loaders, haul trucks

Alignment	Activity	Typical Duration (Total Months)	Description	Equipment Required
At-Grade Alignment	MSF (Sites 1, 2, or 3)	18-24	Install mechanical, electrical, and plumbing; special track; specialized washing equipment; and rebar. Pour concrete.	Crane, forklifts, cement trucks
Aerial Alignment	Utility Relocation	12-18	Relocate underground and/or overhead utilities from temporary and permanent elements related to the construction and/or operation of the Build Alternative.	Saw cutter, backhoes, jackhammers, excavators, hydro excavation trucks, dump trucks, cement trucks, asphalt pavers, cranes, bucket trucks, forklift, manlift, cable-pull trucks
Aerial Alignment	Civil Roadway	12-24	Reconfigure roadway to accommodate aerial guideway. Demolish existing roadway installation of curb and gutter, sidewalks and drainage. Install relocated traffic signals and stripe roadway.	Excavators, backhoes, compactors, milling machines, jackhammers, asphalt pavers, pavement breakers, manlifts, forklifts, dump trucks, cement trucks, road-striping
Aerial Alignment	Retaining Walls	6-12	Structure would allow for transition from underground or at-grade into an aerial configuration.	Excavators, cranes, compactors, cement truck, forklifts, dump trucks
Aerial Alignment	Elevated Guideway	12-18	Install foundation columns, falsework, track slabs, track, and elevated sections.	Cast-in-drilled-hole drill rig or pile driver, cranes, forklifts, compressors, haul trucks, manlifts, loaders, cement trucks
Aerial Alignment	Light Rail Transit Systems Installation	14-24	Install catenary overhead wire system, traction power substations, train control and communications equipment, etc.	Excavators, backhoes, forklifts, Hi-Rail vehicles, cable pull truck, cranes, manlifts
Underground Alignment	Utility Relocation	12-18	Relocate and hang underground utilities from temporary and permanent elements related to the construction and operation of the Build Alternative.	Saw cutter, backhoes, jackhammers, excavators, hydro excavation trucks, dump trucks, cement trucks, pavers, forklift, manlift, jack and bore, horizontal directional drilling drill
Underground Alignment	Open Cut and Cut and Cover Construction	18-24	Supports the construction of the tunnel boring machine launching and receiving pit, underground stations. Install soldier piles for beam and lag support of excavation and excavation. Cover excavation with temporary decking.	Mobile cranes tower cranes, excavators, cast-in-drilled-hole drill rigs or pile drivers, skid steers, loading shovel, 360 excavator, backhoes, loaders, dump trucks, concrete delivery trucks, concrete pumps, forks, generators.

Alignment	Activity	Typical Duration (Total Months)	Description	Equipment Required
Underground Alignment	Bored Tunnel	15-20 (3-4 Month Lag on Starting 2nd Bore)	Construction of underground guideway.	Tunnel boring machines, rail mounted equipment and material/labor/tunnel liner delivery vehicles, spoil retrieval conveyors, earth moving vehicles, substation, air compressor, grouting plant, soil conditioning plant, cranes (tower, gantry, crawler, mobile, etc.) drilling rigs, concrete mixers and pumping equipment, flatbed trucks, electric power supply equipment, generator, tunnel ventilation equipment, sand and gravel delivery trucks, dump trucks, ripper teeth or roadheader mounted excavators, drill jumbo, grouting equipment, shotcrete pump and nozzle, hyperbaric apparatus, loading shovel, 360 excavator, tunnel spoil conveyor, conveyor trains, materials muck delivery, drill jumbo, and concrete breaker.
Underground Alignment	Station Construction	36-48	Install mechanical, electrical, and plumbing, rebar, ventilation fans, sump pump system, fire suppression, canopies, faregates, ticketing, finishes, elevators, escalators, and station artwork.	Tower crane, skid steer, cast-in-drilled-hole drill rig or pile driver, forklifts, generator sets, loaders, welders
Underground Alignment	Light Rail Transit Systems Installation	14-24	Installation of traction power substations, train control and communications equipment, overhead conductor rail, signal switches, and testing.	Forklifts, skid steer, Highway and Rail vehicles
Underground Alignment	Underground Guideway	12-18	Install special trackwork and track.	Forklifts, compressors

Source: CDM Smith/AECOM JV and HNTB/Cordoba JV 2026.

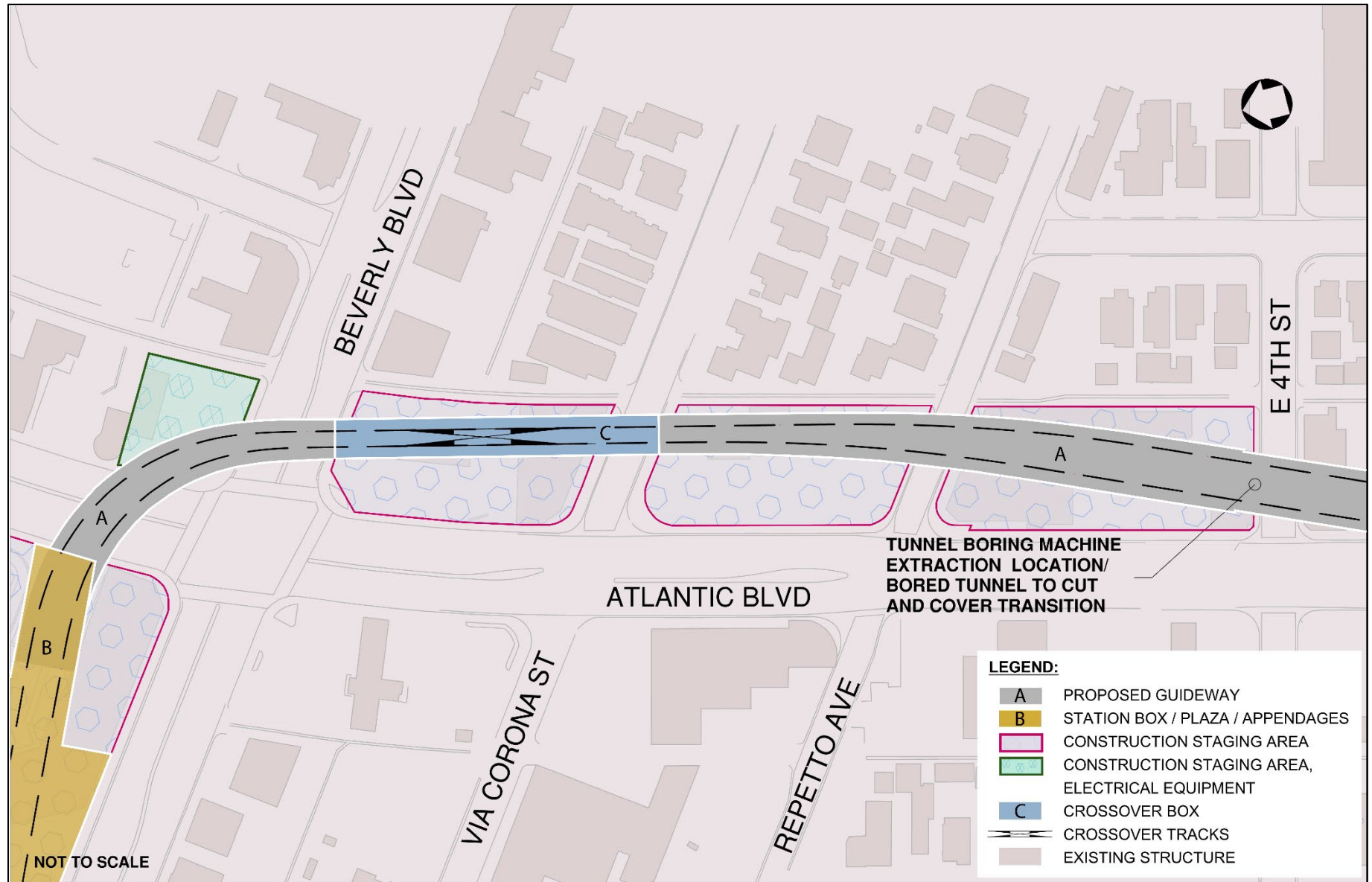
Staging areas could be used to store building materials and construction equipment, assemble the tunnel boring machines, temporarily store excavated materials, and house temporary field offices for the contractor. The staging areas would be established in the vicinity of the Build Alternative within parking facilities, and/or on parcels that would be acquired for the proposed stations, traction power substations sites, and the MSF and yard lead tracks. Site clearance and demolition of existing structures at the construction staging areas would occur before major construction activities begin. The size of the construction staging areas would range from approximately 0.7 acres (29,865 square feet) to 5 acres (217,800 square feet). There would be potential future Joint Development opportunities within these areas after Metro is finished with construction. The MSF site could also be used as a staging area. Potential construction staging areas related to the Build Alternative are listed in **Table 2.10**.

Table 2.10 Potential Construction Staging Area Locations

Build Alternative Component	Potential Location Description
Atlantic/Pomona Station	At the Atlantic/Pomona station site between Pomona Boulevard, Beverly Boulevard and Atlantic Boulevard (See Figure 2.5).
Tunnel Boring Machine Extraction Site	East of Atlantic Boulevard between Repetto Avenue and 4th Street. Additional sites for the tunnel would be used East of Atlantic Boulevard between Repetto Ave and one parcel north of Beverly Boulevard (See Figure 2.15).
Atlantic/Whittier Station	Northeast parcel and southwest parcel at the intersection of Atlantic Boulevard and Whittier Boulevard (See Figure 2.6).
Commerce/Citadel Station	Near the Commerce/Citadel station site off Smithway Street and within the existing Citadel Outlet parking lot (See Figure 2.7).
Tunnel Boring Machine Launching Site/MSF Site 3	Southern limit of the tunnel near Saybrook Avenue and Gayhart Street northwest of Washington Boulevard (See Figure 2.16).
MSF Sites 1 and 2	At or near MSF Site 1 or 2 between Yates Avenue and Vail Avenue north of Washington Boulevard.
Greenwood Station	Near intersection of Washington Boulevard and Greenwood Avenue (See Figure 2.8).
Standalone Traction Power Substations Sites	Varies.

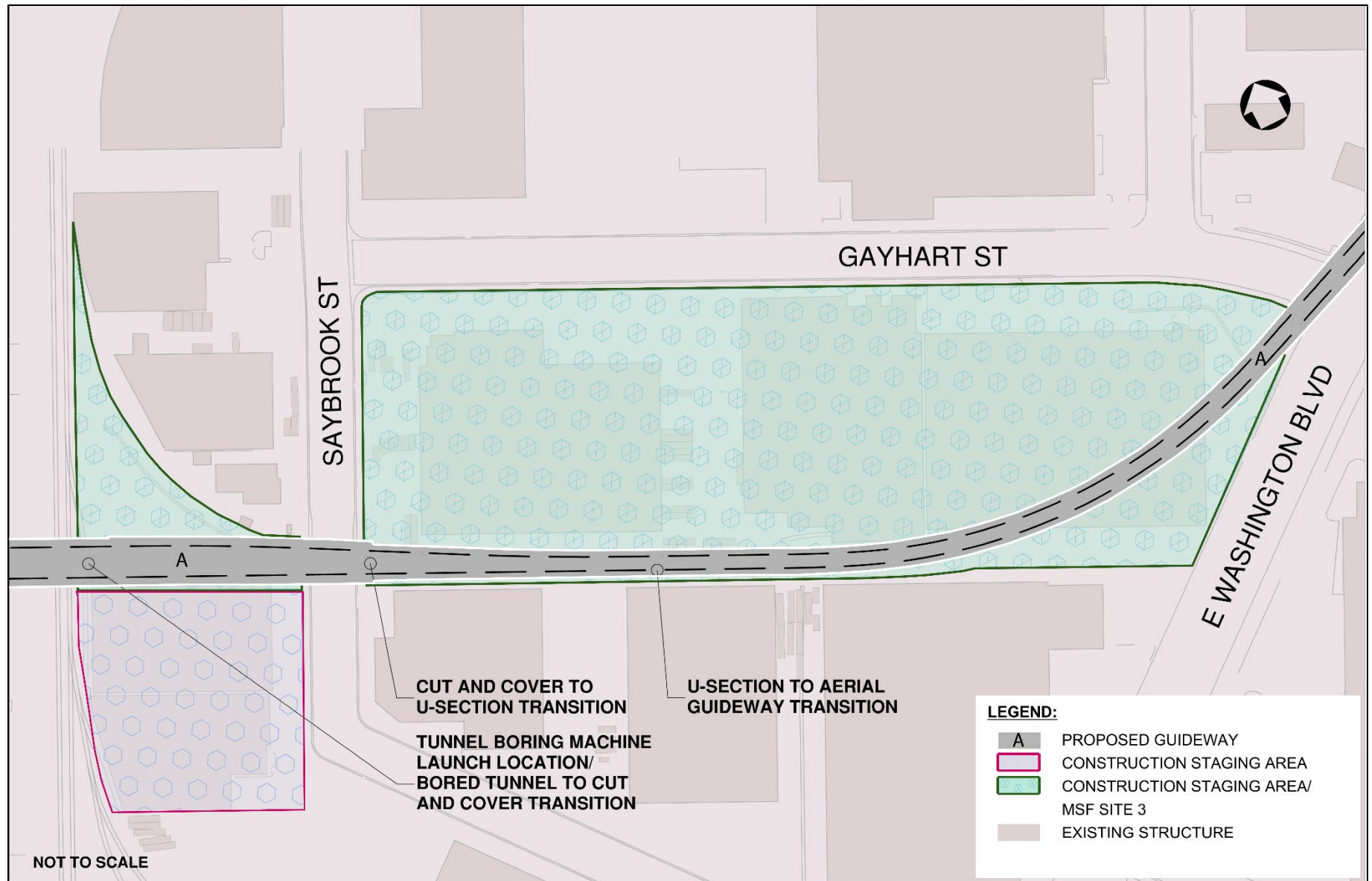
Source: Metro; CDM Smith/AECOM JV 2026.

The tunnel boring machine would be extracted near the intersection of Atlantic Boulevard and 4th Street. In this area, the cut and cover method would be used east of Atlantic Boulevard in a north-south orientation, starting north of 4th Street and then transition in an east-west orientation along Beverly Boulevard and 3rd Street. The cut and cover would end on 3rd Street between Woods Avenue and La Verne Avenue where the tunnel connects to existing tracks. Cut and cover activities would deck portions of existing roadways that support live traffic. Such activities would occur at Atlantic Boulevard between Beverly Boulevard and Pomona Boulevard (east of the proposed Atlantic Pomona station), and east of Atlantic Boulevard at Beverly Boulevard, Via Corona Street, Repetto Avenue, and 4th Street (see **Figure 2.15**). A temporary electrical conduit would be extended from the existing Vail Substation north of Flotilla Street to the tunnel boring machine launch site to power the tunnel boring machine. This would involve installing the temporary conduit in a trench within right-of-way of Yates Avenue and Washington Boulevard. Building the service feed would include the following construction activities: excavating the trench line, installing shoring to support the trench, laying conduit, installing vaults, encasing the conduit with concrete, backfilling the trench with slurry and/or compacted soil, and placing steel plates over the trench line. Wires would be pulled into the conduit between vaults and then energized during a tie-in to the existing power grid. Excavation for the trench would be approximately 3 feet wide and about 20 feet deep.



Source: Metro; HNTB/Cordoba 2026.

Figure 2.15 Cut-and-Cover Tunnel and Mid-Line Crossover Structures



Source: Metro; HNTB/Cordoba 2026.

Figure 2.16 Tunnel Boring Machine and Staging Area Sites

The underground guideway would typically contain two twin bored tunnels. These bored tunnels would be constructed using an earth pressure balance tunnel boring machine. Tunnel boring machines are horizontal drills that continuously excavate circular tunnel sections. The tunnel boring machine would be launched at the southern limit of the tunnel near Saybrook Avenue and Gayhart Street northwest of Washington Boulevard (See **Figure 2.16**). The tunnel boring machine would then excavate the first tunnel and advance north towards the excavation pit located at East of Atlantic Boulevard between Repetto Avenue and 4th Street. The tunnel boring machine would be turned at the excavation pit and relaunched towards the launch pit to bore the second tunnel. The tunnel boring machine would be disassembled and lifted from the launch pit.

The contractor would determine the method of removing material and hauling it away from the job site in compliance with existing regulations. Excavated material is anticipated to be loaded into trucks and transported along the Eastside Transit Corridor right-of-way and/or major streets to construction staging areas or to or from the nearest freeway (e.g., Interstate 5, State Route 60, and Interstate 605). Potential haul routes would be identified based on the location of the construction activities with respect to major streets leading to freeways.

Excavated material from major Los Angeles construction sites is typically disposed of at sites on the Interstate 10 corridor or accessed from State Route 14. The northern haul routes are shown in **Figure 2.17**. The southern haul routes, which would be where the tunnel boring machine is launched, are shown in **Figure 2.18**. The Build Alternative may utilize Interstate 5 as a haul route during construction activities. Consistent with local plans, truck routes that may be used for transporting and hauling construction-related materials include Washington Boulevard, Atlantic Boulevard, Whittier Boulevard, Saybrook Avenue, Gayhart Street, Telegraph Road, Paramount Boulevard, Rosemead Boulevard, Slauson Avenue, Smithway Street, Vail Avenue, Yates Avenue, and Greenwood Avenue. Hauling would also occur on Beverly Boulevard and 3rd Street within East Los Angeles (unincorporated Los Angeles County) with approval from the Los Angeles County Department of Public Works through a Haul Route Permit. Estimates of the total number of haul trucks are provided in **Table 2.11**. This would translate to approximately 15 additional trucks on the roadway during each morning peak (6 am – 9 am) and afternoon/evening peak (3 pm – 7 pm).

Table 2.11 Total Number of Anticipated Haul Trucks

Configuration	Total Number of Trucks
Aerial	1,828
At-Grade	1,540
Underground	70,233
Total	73,601

Source: Metro; CDM Smith/AECOM JV 2026.

Final design and actual construction methods, sequencing, and equipment may vary, depending in part on how contractors choose to implement their work to be most cost-effective, within the parameters set forth in the bid and contract documents. Construction impacts associated with the No Build Alternative and the Build Alternative are evaluated in **Section 3.17** (Construction).



Source: CDM Smith/AECOM JV 2026.

Note: Haul route is a potential scenario. The contractor would determine the method of removing material and hauling it away from the job site.

Figure 2.17 Northern Haul Routes



Source: CDM Smith/AECOM JV 2026.

Note: Haul route is a potential scenario. The contractor would determine the method of removing material and hauling it away from the job site.

Figure 2.18 Southern Haul Route

2.3.6 Operations

Operation of the Build Alternative would be managed by Metro staff and personnel. The Build Alternative would operate a train line using light rail technology. Operational activities of the Build Alternative include train car operations, train car maintenance (including cleaning and storage), track maintenance, and general administration. In addition, the Build Alternative would include emergency lighting, communications and wayfinding systems, a command-and-control system, a public information system, and security systems to monitor activity at station platforms along the alignment and at the MSF. Operation of the MSF would include daily service and cleaning, inspection and repairs, and storage of light rail vehicles. Activities may occur at the MSF throughout the day and night depending upon train schedules, workload, and maintenance requirements. Primary maintenance functions would include service/inspections, heavy repairs, component changeouts, and unscheduled maintenance. Adjacent to the maintenance tracks would be the support shops, parts storeroom, and a supervisor's office.

Table 2.12 summarizes the operating hours and frequency for the Build Alternative, which would be comparable to the weekday, Saturday and Sunday, and holiday schedules for the Metro E Line. The operational headways (the time between vehicles past a given point) are consistent with Metro design requirements for future rail services.

Table 2.12 Operating Hours and Frequency for the Build Alternative

Time	Weekday Frequency	Weekend/Holiday Frequency
4:00 am - 5:00 am	12 minutes	20 minutes
5:00 am - 6:00 am	6 minutes	20 minutes
6:00 am - 7:00 am	6 minutes	20 minutes
7:00 am - 8:00 am	6 minutes	20 minutes
8:00 am - 9:00 am	6 minutes	20 minutes
9:00 am - 10:00 am	10 minutes	10 minutes
10:00 am - 11:00 am	10 minutes	10 minutes
11:00 am - 12:00 pm	10 minutes	10 minutes
12:00 am - 1:00 pm	10 minutes	10 minutes
1:00 pm - 2:00 pm	10 minutes	10 minutes
2:00 pm - 3:00 pm	10 minutes	10 minutes
3:00 pm - 4:00 pm	6 minutes	10 minutes
4:00 pm - 5:00 pm	6 minutes	10 minutes
5:00 pm - 6:00 pm	6 minutes	10 minutes
6:00 pm - 7:00 pm	6 minutes	10 minutes
7:00 pm - 8:00 pm	15 minutes	10 minutes
8:00 pm - 9:00 pm	20 minutes	10 minutes
9:00 pm - 10:00 pm	20 minutes	20 minutes
10:00 pm - 11:00 pm	20 minutes	20 minutes
11:00 pm - 12:00 am	20 minutes	20 minutes
12:00 pm - 1:00 am	20 minutes	20 minutes

Source: Metro; CDM Smith/AECOM JV 2026.

Key: am = ante meridiem; pm = post meridiem

Ridership forecasts for the Build Alternative anticipate approximately 7,550 total weekday station boardings by 2050 compared to 3,010 boardings at the existing Atlantic/Pomona Station under the No Build Alternative. Based on the operating headway requirements and ridership forecasts, Metro anticipates the need for an additional three trains for the Metro E Line to operate the Build Alternative. Each train would have three cars and there would be one spare train for a total of 12 new train cars. **Table 2.13** summarizes ridership projections for the Build Alternative by 2050. Further information on ridership projections is available in **Section 3.15** and **Appendix O** (Transportation Impact Report).

Table 2.13 2050 Ridership Forecast of the Build Alternative

Proposed Station	Average Weekday Station Boardings
Greenwood	2,290 passengers
Commerce/Citadel	1,350 passengers
Atlantic/Whittier	1,260 passengers
Atlantic/Pomona	2,650 passengers
Total Station Boardings	7,550 passengers

Source: Metro; CDM Smith/AECOM JV 2026.

2.3.7 Right-of-Way and Property Acquisition

Property acquisitions would be required for the Build Alternative for construction staging areas, tracks, tunneling, aerial structures, vents/switches/egress, stations, train control house, radio communication facilities, traction power substations sites, grade crossing/separations, parking facilities, and the MSF. This includes full acquisitions in the form of permanent aerial easements to accommodate the aerial structures and columns for the aerial segment of the alignment and full property acquisitions for construction staging, the Atlantic/Pomona station and cut and cover tunnels, parking facilities, and the MSF. MSF Site 1 would also require full acquisitions for the yard lead tracks. Partial acquisitions for permanent underground easements would be required to accommodate tunneling for underground alignments and underground traction power substations sites. In addition, partial and full acquisitions would be required for station entrances, grade crossing/separations, and other ancillary facilities. Property acquisition would be limited to properties currently zoned for commercial or industrial uses, and no churches, schools, parks, or other sensitive land uses are expected to be permanently acquired.

Relocation assistance and benefits would be provided to displaced businesses in compliance with federal and state regulations and Metro's policies. Additional information is provided in **Section 3.12** and **Appendix M** (Real Estate and Acquisitions Impact Report).

2.3.8 Preliminary Cost Estimate and Funding

Table 2.14 shows the preliminary cost estimate and funding for the Build Alternative. Additional information on the Build Alternative's economic impact is provided in **Section 3.6** and **Appendix I** (Economic Impacts Report).

2.3.8.1 Project Cost

As presented in December 2022, when the Build Alternative was approved as the Locally Preferred Alternative by the Board (Metro 2024b), the project team worked closely with Program Control's Cost Estimating staff in November 2022 and completed an Independent Cost Estimate update. With consideration of appropriate contingencies and escalation, the forecasted cost estimates are \$7.902 billion for the Build Alternative based on the advanced conceptual engineering design plan (15 percent design). This estimate will be refined upon completion of 30 percent Preliminary Engineering in fall 2026 and following FTA review during the Project Development phase.

2.3.8.2 Funding Plan

The Measure M Ordinance (Los Angeles County Traffic Improvement Plan Ordinance #16-01 passed by voters on November 8, 2016) identifies \$3 billion (in 2015 dollars) in Measure M and other local, state, and federal funding for the Eastside Transit Corridor Phase 2 Extension to the City of Whittier. Because the Measure M Ordinance funding is less than the current cost estimates, the full extension will be developed in segments, starting with the Build Alternative. The funding plan for the Build Alternative (as the Locally Preferred Alternative) was presented to the Board in December 2022 and is comprised of committed Measure M and Measure R sales tax revenues, other local sales tax sources (Proposition A and Proposition C), secured state funds, and additional state and federal funding to be secured.

The Build Alternative is expected to fully utilize the available Measure M Cycle 1 capacity and the portion of Measure R funding assigned to this alignment per Metro Board Motion 8.1 (Metro 2024b). Total secured funding in year-of-expenditure dollars is approximately \$3,959.3 million, as shown in **Table 2.14**. This includes State Transportation Improvement Program formula grant funds, for which Metro requested \$135 million in December 2025. On March 19, 2026, the California Transportation Commission approved an allocation of \$133.8 million for the Build Alternative. The remaining funding to be secured totals approximately \$3,943 million. Metro will continue pursuing state programs (e.g., Transit and Intercity Rail Capital Program, Regional Improvement Program, Senate Bill 1 programs) and federal programs (e.g., Capital Improvement Grants/New Starts, Congestion Mitigation and Air Quality Program, National Infrastructure Project Assistance Grants Program). Local funding tradeoffs may also be required depending on state and federal outcomes.

Table 2.14 Funding Sources

Funding Sources		Build Alternative Costs in year of expenditure dollars (\$), in millions
Sources - Secured		
Local (Sales Tax – Measure R, Measure M, Proposition A, Proposition C, 3% Contribution)		\$3,790.5
State (Transit and Intercity Rail Capital Program, State Transportation Improvement Program)		\$168.8
Total Secured		\$3,959.3
Sources – Yet to be Secured		
State (e.g., Senate Bill 1, Transit & Intercity Rail Capital Program)		\$1,505.1
Federal (e.g., New Starts)		\$2,437.9
Total Yet-to-be-secured		\$3,943.0
Total		\$7,902.3

Source: Metro 2026.

Key: % = percent; \$ = dollars

2.3.9 Permits and Approvals

Table 2.15 shows the various permits and/or approvals required for the Build Alternative.

Table 2.15 Agency Approvals and Permits for the Build Alternative

Agency	Approvals and Permits
FTA	Environmental decision document, Section 4(f) determination
Metro	Environmental decision document for the state environmental process
California Office of Historic Preservation, State Historic Preservation Officer	Section 106 Review
California Public Utilities Commission	Grade Separations, Crossings, State Safety Oversight
Department of Toxic Substances Control	Hazardous materials clean up
State Water Resources Control Board	Industrial General Permit, Construction General Permit, and Storm Water Pollution Prevention Plan
Los Angeles Regional Water Quality Control Board	Los Angeles County Municipal Separate Storm Sewer System National Pollutant Discharge Elimination System Package, Waste Discharge Requirements Specified for Discharges to Groundwater in Santa Clara and Los Angeles River Basins (Order Number 93-010) Waste Discharge Requirements for Discharge of Non-Hazardous Contaminated Soils and Other Wastes in Los Angeles River and Santa Clara River Basins (Order Number 91-93)
South Coast Air Quality Management District	Consultation to identify best practices for construction emissions, Clean Air Act Title V permit
Burlington Northern Santa Fe Railroad	Encroachment permits
Union Pacific Railroad	Encroachment permits
Los Angeles County Department of Public Works	Permits and/or discretionary actions required
County of Los Angeles and Cities of Commerce and Montebello	Permits and/or discretionary actions required
Utility providers (various)	Easements, relocation permits

Source: Metro; CDM Smith/AECOM JV 2026.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Introduction

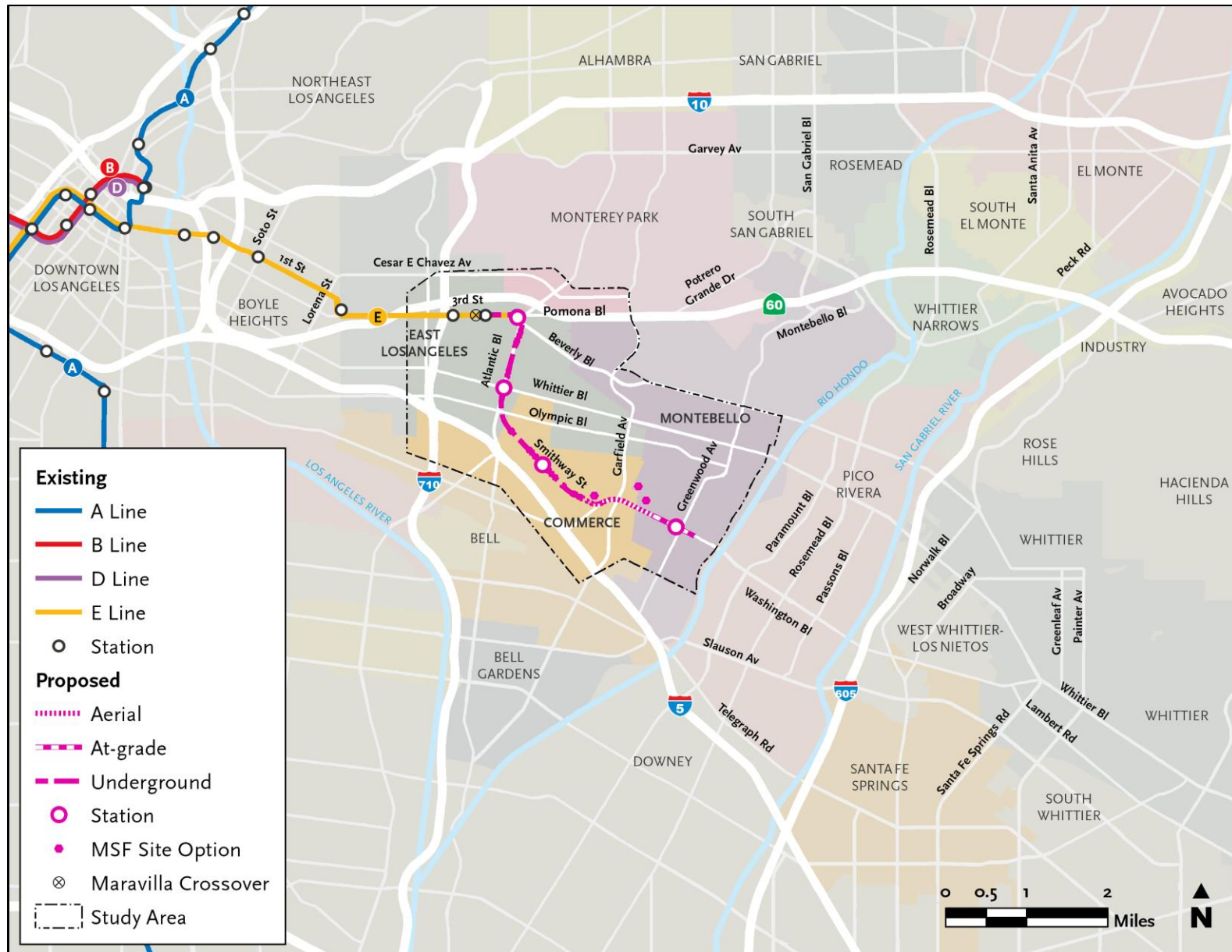
This chapter of the EA discusses the affected environment, environmental effects, project measures, and mitigation measures for operation and construction of the No Build Alternative and Build Alternative. Long-term effects are addressed in **Section 3.2** through **Section 3.16**. Short-term construction effects are addressed in **Section 3.17**. Additional details are provided for some resource topics in **Appendix F** through **Appendix O** of this EA.

Individual topic resources analyzed in this EA include: Air Quality; Biological Resources; Community Impacts; Historic, Archaeological and Tribal Resources; Economic Impacts; Geology, Soils, and Paleontological Resources; Visual Resources; Hazardous Materials; Water Resources; Land Use and Development; Acquisitions and Relocations; Noise; Safety and Security; Transportation; and Utilities; Construction Impacts; and Section 4(f) Resources.

3.1.1 Study Area

The Study Area is an approximately 0.5-mile to 2-mile radius from the centerline of the Build Alternative's guideway; it primarily encompasses the Cities of Commerce and Montebello, and the community of East Los Angeles (unincorporated Los Angeles County), which are located along the alignment corridor (see **Figure 3.1**). A small portion of the City of Monterey Park is on the northwestern edge. The Study Area varies in distance from the alignment to encompass the area of localized impacts and also include nearby boundaries of Cities and census tracts that are considered in the evaluation of topics such as land use and growth.

The Study Area and greater eastern Los Angeles County consist of a diverse mix of uses and activity centers including single- and multi-family residences, commercial and retail uses, industrial development, parks and recreation, health and medical facilities, educational institutions, and vacant land. Major activity centers include East Los Angeles Community College, recreation areas, major retail and commercial centers (e.g., Citadel Outlets and the Historic Whittier Boulevard Shopping District), and medical centers. The Study Area is densely populated with low-income and transit dependent communities. In addition, many industrial and commercial properties utilize the arterials and freeways within the Study Area for logistical freight activities.



Source: Metro; CDM Smith/AECOM JV 2026.

Figure 3.1 Study Area

3.1.2 NEPA Implementing Regulations

In January 2025, President Trump signed Executive Order 14154, Unleashing American Energy, which required the Council on Environmental Quality (CEQ) to issue guidance on implementing the NEPA, 42 United States Code. 4321 *et seq.*, and propose rescinding its NEPA regulations at 40 CFR Part 1500 *et seq.* Subsequently, on February 25, 2025, CEQ published an Interim Final Rule removing the CEQ NEPA implementing regulations, effective April 11, 2025 (90 Federal Register 10610). The United States Department of Transportation NEPA implementing regulations at 23 CFR Part 771, Environmental Impact and Related Procedures, were modified to remove cross-references to the defunct CEQ regulations through an Interim Final Rule that became effective immediately upon its publication in the Federal Register on July 3, 2025.

3.1.3 Reasonably Foreseeable Effects

On February 19, 2025, CEQ issued a memorandum, encouraging Federal agencies to “analyze the reasonably foreseeable effects of the proposed action consistent with Section 102 of NEPA, which does not employ the term ‘cumulative effects,’ [...and the agencies should consider] ‘reasonably foreseeable’ effects, regardless of whether or not those effects might be characterized as ‘cumulative.’” Further, the United States Supreme Court decision in *Seven County Infrastructure Coalition v. Eagle County, Colorado* held that the focus of NEPA is the project at hand, not other separate projects (United States Supreme Court Report, Volume 605, Pages 168 -203 May 29, 2025). It also reinforced the “reasonably foreseeable” effects standard for measuring effects in NEPA, which was incorporated into the United States Department of Transportation’s NEPA implementing regulations at 23 CFR Part 771.

Accordingly, relying upon the NEPA requirements, as revised by the Building United States Infrastructure through Limited Delays and Efficient Reviews Act of 2023, and 23 CFR Part 771, effective July 3, 2025, this EA analyzes reasonably foreseeable effects that result from the Project.⁷ Reasonably foreseeable effects are those effects that have a rational link to the Project in terms of geographic and temporal proximity, and must be sufficiently likely to occur. Reasonably foreseeable effects do not include effects that are speculative in nature or causally attenuated⁸ from the Project.

Unless otherwise defined in the resource-specific section of the EA, for the purposes of assessing reasonably foreseeable effects, the following parameters apply:

- Geographic proximity includes effects within or directly adjacent to the Study Area as described in **Section 3.1.1**. For some environmental resource topics, specialized study areas are geographical boundaries designed to analyze a specific environmental, social, or technical impact. **Appendix S** (Regulatory Setting Summary) summarizes applicable federal, state, and local regulations for the individual environmental resource.
- The temporal scope for long-term effects is between 2025 (the year the EA for the Project was started) and 2050 (the horizon year for planned regional projects in operation). Temporary effects are expected to occur during Project construction and are described in **Section 3.17** (Construction). Project construction is anticipated to last approximately 60 to 84 months.

⁷ This EA does not categorize the reasonably foreseeable effects of the proposed action based upon types of effects. As a result of the changes discussed in this chapter, FTA and Metro reviewed the documentation supporting the NEPA analysis to determine whether the effects that had previously been characterized as direct, indirect, and cumulative were reasonably foreseeable. The appendices supporting the EA, which contain the terms “direct” and “indirect” were included in this review. The appendices contain these terms because the terms were required under the CEQ regulations in effect at the time the appendices were prepared. Although the terms “direct” and “indirect” have not been removed from the appendices, FTA and Metro reviewed the effects characterized (or categorized) as indirect in the appendices to determine whether such effects are reasonably foreseeable.

⁸ In this context, “causally attenuated” means effects that are remote in time or place, or are the result of a lengthy causal chain (meaning intervening variables such as other actions may contribute or cause an effect), thereby making it difficult to establish a sufficiently close connection between the Project and a particular environmental impact. Generally, an outcome or effect is causally attenuated if it cannot be directly attributed to one particular action, but rather may result from another action or series of actions.

- Sufficiently likely to occur includes effects associated with other projects for which funding has been committed, including, for example, projects included in the fiscally-constrained list of projects in the Regional Transportation Plan with dedicated funding for construction.

In accordance with 23 CFR 771.107, this EA investigates reasonably foreseeable environmental impacts to determine the environmental process to be followed and to assist in the preparation of the environmental document. Environmental effects from the alternatives are evaluated based on the following criteria:

- No effect – The alternative would not alter the environmental status quo.
- No adverse effect – The alternative could result in alterations to the environmental setting but would not negatively affect the environmental resource value or quality as it exists prior to the alternative.
- Adverse effect – The alternative would result in alterations to the environmental setting and would significantly and negatively affect the environmental resource value or quality as it exists prior to the alternative.
- Beneficial effect – The alternative would result in the improvement of the environmental resource value or quality as it exists prior to the alternative.

Project measures and mitigation measures are identified for various resources:

- Project measures are incorporated as part of the Build Alternative and consist of design features, best management practices, or other measures required by law and permit approvals that avoid or minimize potential adverse effects.
- Mitigation measures are additional actions, not otherwise part of the Build Alternative, that are designed to minimize, reduce, or compensate for adverse effects. Mitigation measures are required where adverse effects have been identified based on the analyses presented within this EA. The project measures, mitigation measures, and the level of effects after implementation are presented in **Appendix D** (Environmental Commitments Record), of this EA.

3.1.4 Environmental Resources of No Concern

The following resources would not be affected by the No Build Alternative or Build Alternative; thus, they are not discussed in detail in this EA:

- Bald and Golden Eagle Protection Act. The Study Area does not provide suitable habitat for bald eagles (*Haliaeetus leucocephalus*) or golden eagles (*Aquila chrysaetos*). Thus, there would be no effect on bald or golden eagles from the Project.
- Coastal Zones (California Coastal Commission 2025; United States Fish and Wildlife Service 2025a): The Study Area is not in or near a defined coastal zone or coastal barrier resources system unit; therefore, the alternatives have no potential to affect coastal resources.
- Farmland (United States Department of Agriculture 1981, California Department of Conservation 2025): The Study Area is primarily urban, and no farmland or soils that could support farmland are in the area. Further, the Build Alternative and No Build Alternative would not convert or otherwise affect farmland.
- Growth: Neither the No Build Alternative nor the Build Alternative would result in substantial changes to the existing population in the Study Area. Neither alternative would include the development of temporary or permanent housing.
- Wild and Scenic Rivers (National Wild and Scenic Rivers System 2025): There are no wild or scenic rivers in or near the Study Area; thus, the alternatives have no potential to affect designated wild or scenic rivers.

- Section 6(f) of the Land and Water Conservation Fund Act: This requires that public parks and recreation areas that were established or improved with funds available through the Land and Water Conservation Fund Act be retained and used for public outdoor recreation. One potential resource was identified within 0.25 mile of the Build Alternative alignment using the Land and Water Conservation Fund Act database: the East 60th Street Community Youth Center or East Los Angeles Community Youth Center at 5120 Beverly Boulevard (Land and Water Conservation Fund 2022). However, this resource was not listed on the California State Parks, Land and Water Conservation Fund Act projects database (California State Parks 2019). Further, on July 22, 2025, the Los Angeles County Department of Parks and Recreation confirmed that the community center is privately owned (Los Angeles County Department of Parks and Recreation 2025). Thus, no Section 6(f) resources were identified within 0.25 mile of the Build Alternative alignment and Section 6(f) resources are not analyzed further.

3.2 Air Quality

This section evaluates the potential long-term effects of the No Build Alternative and the Build Alternative on air quality, as detailed in **Appendix F** (Air Quality Impacts Report). Short-term construction effects are discussed in **Section 3.17** (Construction).

The assessment of reasonably foreseeable effects in this section is based upon the geographic and temporal proximity parameters detailed in **Chapter 3.0** (Introduction).

3.2.1 Affected Environment

The Study Area for this analysis is the 0.5-mile to 2-mile radius from the guideway centerline, as described in **Section 3.1.1** (Study Area) with a focus on the area within 0.25 mile of the alignment and 0.5 mile of the stations where changes in transit mode and vehicle circulation would be most likely to occur. The Study Area is located within the South Coast Air Basin. A variety of air pollution sources, including existing vehicular traffic within the Study Area, contribute to regional air quality in the South Coast Air Basin, which is designated as a federal nonattainment area for ozone, fine particulate matter of 2.5 microns in diameter and smaller, and lead and is designated as a federal maintenance area for carbon monoxide and fine particulate matter of 10 microns in diameter and smaller.

Air quality regulations applicable to the Project are summarized in **Appendix S** (Regulatory Setting Summary) and detailed in **Appendix F**.

Operational emissions were quantified so that the Build Alternative's 2050 reasonably foreseeable benefits or effects could be evaluated against those of the 2050 No Build Alternative. Emissions can be compared to regional criteria air pollutant thresholds, established by the South Coast Air Quality Management District (SCAQMD), the regional entity with delegated authority of air quality for the South Coast Air Basin. The SCAQMD has established regional daily emission levels for various criteria pollutants. Project emission levels below these thresholds would not be expected to cause a new violation or exacerbate an existing violation of the National Ambient Air Quality Standards (NAAQS) or California Ambient Air Quality Standards (CAAQS) within the region.

The NAAQS are defined under the Clean Air Act (42 United States Code [USC] Section 7409) as ambient levels of criteria pollutants. The NAAQS are developed to be protective of both the general public and of sensitive subpopulations such as children, the elderly, and individuals with chronic respiratory problems who may be more sensitive to the health impacts of air pollutants. The SCAQMD defines sensitive receptors as those locations where a member of a sensitive subpopulation may be present for up to 24 hours. Within the Study Area, sensitive receptors include residences, hospitals, and convalescent facilities.

Regional traffic emissions were calculated from projected vehicle miles traveled for existing conditions, 2050 Build Alternative conditions, and the 2050 No Build Alternative using the California Emission Factor Model for On-road Motor Vehicles (EMFAC) version 2021 incorporating United States Environmental Protection Agency approved November 21, 2025 off-model adjustment factors for the EMFAC2021 model. These factors removed the emission benefits of the California's Advanced Clean Trucks, Zero-Emission Airport Shuttle, Heavy-Duty Vehicle and Engine Emission Warranty and Maintenance Provisions Phase 1, and Heavy-Duty Omnibus regulations. The factors were applied to EMFAC2021 model outputs and incorporated in all results used in this analysis. Model parameters are discussed in Section 4.1, Methodology – Operations, in **Appendix F**.

EMFAC was also used to estimate parking-related evaporative emissions from vehicles. Emissions from powering the electric light rail transit vehicles or lighting the proposed stations were not assumed to occur locally and therefore, were not estimated. Emissions for operation of the MSF were estimated using default parameters in the California Emission Estimator Model (CalEEMod).

FTA must find that a transit project in a nonattainment or maintenance area meets the project-level conformity requirements before FTA can make a grant for any element of that project's implementation. In order to conform, a transit project must come from a currently conforming Regional Transportation Plan and Federal Transportation Improvement Program, must not cause or contribute to any air quality hot-spots, and must follow any other requirements in the state implementation plan for air quality that pertain to the project. For the Build Alternative, traffic volumes at major intersections represent the only emission source which would require the evaluation of carbon monoxide (CO) hot-spots. Traffic volumes at Build Alternative intersections are based on detailed traffic modeling conducted for the transportation analysis as discussed in **Appendix O** (Transportation Impacts Report). Methods for evaluating CO hot-spots are provided in **Appendix F**. Projects requiring hot-spot analyses for particulate matter of 2.5 microns in diameter and smaller (PM_{2.5}) or particulate matter of 10 microns in diameter and smaller (PM₁₀) generally include major new or expanded transit centers or stations where a large number of diesel-powered transit vehicles will congregate. The Project (including the No Build Alternative and Build Alternative) does not include diesel-powered transit vehicles.

Emissions from construction of the Build Alternative are addressed in **Table 3.17-2** of **Section 3.17** and **Appendix F**.

Vehicular traffic, commercial operations, and industrial operations contribute to regional air quality in the South Coast Air Basin. Air quality data from monitoring stations near the Study Area show that maximum 1- and 8-hour concentrations of carbon monoxide in the Study Area from 2021 through 2023 were 1.8 and 1.5 parts per million by volume, respectively; these concentrations are well below the NAAQS thresholds of 35 and 9 parts per million by volume, respectively.

This study evaluated CO hot-spots for the highest volume intersections in the Study Area. Under existing conditions, the highest peak hour-volume intersections within the Study Area would be the following:

- Multiway intersection of Atlantic Boulevard, Triggs Street, Goodrich Boulevard, Telegraph Road, and Ferguson Drive with 4,243 vehicles in the peak hour; and
- Multiway intersection of Woods Avenue, Beverly Boulevard, 3rd Street, and Pomona Boulevard with 4,150 vehicles in the peak hour.

This study compiled emission inventories for the existing conditions baseline year and identified potential Project-related operational emission sources including regional traffic, operation of light rail vehicles, operation of light rail vehicle stations, evaporation of volatile organic compounds from parked vehicle fuel tanks at light rail vehicle stations, operation of the MSF, and operation of any bus routes. **Table 3.2-1** shows the total regional operating emissions which would be associated with Project-related sources under existing conditions.

Table 3.2-1 Existing Conditions – Regional Total Operational Emissions (Pounds per Day)

Emission Source	VOC	CO	NOx	SO ₂	PM ₁₀	PM _{2.5}
Regional Traffic	112,421	1,490,131	179,699	3,536	364,202	94,110
Total	112,421	1,490,131	179,699	3,536	364,202	94,110

Source: CDM Smith/AECOM JV 2026.

Key: VOC = volatile organic compounds; CO = carbon monoxide; NOx = nitrogen oxides; SO₂=sulfur dioxide; PM₁₀ = Particulate Matter of 10 Microns in Diameter and Smaller; PM_{2.5} = Particulate Matter of 2.5 Microns in Diameter and Smaller

3.2.2 No Build Alternative

The No Build Alternative, as described in **Section 2.2** of the EA, would include already planned and funded roadway and transit projects but would not provide a rail transit option for communities in eastern Los Angeles County.

Peak hour traffic volumes under the No Build Alternative at the two highest-volume intersections would increase from 4,150 to 4,469 and from 4,243 to 4,442 between 2025 and 2050, a 7.7 percent and 4.7 percent increase, respectively. The EMFAC2021 model including the November 2025 off-model adjustment factors provides regional vehicle aggregate CO running exhaust emission rates of 1.32 grams per mile and 0.85 grams per mile in 2025 and 2050, respectively. This 35.7 percent reduction in emission factors is driven by changes to the fleet mix and the gradual phase-in of Federal and Environmental Protection Agency-approved California vehicle regulations. Since the percent reduction in emission rates between current conditions and the No Build Alternative is greater than the percent increase to peak traffic volumes over the same period, there would be no potential for the No Build Alternative to generate a CO hot-spot.

The operational emissions associated with the No Build Alternative would come from regional traffic, which is summarized in **Table 3.2-2**.

Table 3.2-2 No Build Alternative – Regional Total Operational Emissions (Pounds per Day) (2050)

Emission Source	VOC	CO	NOx	SO ₂	PM ₁₀	PM _{2.5}
Regional Traffic	73,292	1,081,888	158,988	3,315	411,588	105,659
Total	73,292	1,081,888	158,988	3,315	411,588	105,659

Source: CDM Smith/AECOM JV 2026.

Key: VOC = volatile organic compounds; CO = carbon monoxide; NOx = nitrogen oxides; SO₂=sulfur dioxide; PM₁₀ = Particulate Matter of 10 Microns in Diameter and Smaller; PM_{2.5} = Particulate Matter of 2.5 Microns in Diameter and Smaller

As discussed in **Appendix F**, modeling performed by the Federal Highway Administration using the Environmental Protection Agency’s MOVES model with national default fleet data indicates that overall mobile source air toxics emissions are anticipated to decline significantly over the next several decades such that emissions would be lower than existing conditions.

The No Build Alternative would be inconsistent with the currently approved 2024 RTP and 2025 Federal Transportation Improvement Program (FTIP) as it would not provide a rail transit option for communities in eastern Los Angeles County (**Appendix F** provides additional detail). Therefore, as shown in **Table 3.2-3**, the No Build Alternative would not be consistent with adopted regional and local plans and would result in an adverse air quality effect.

Table 3.2-3 Air Quality Impact Summary – No Build Alternative

Topic	Impact	Rationale
Consistency with 2025 Federal Transportation Improvement Program (FTIP) and 2024 Regional Transportation Plan (2024 RTP)	Adverse Effect	Inconsistent with plans; would not support the growth and transit projections of the 2024 RTP and 2025 FTIP.
CO and particulate matter hot-spot	No Adverse Effect	- Maximum ambient monitored CO concentrations average approximately 5 percent of the 1-hour NAAQS and 16 percent of the 8-hour NAAQS. - More stringent engine standards would lead to an anticipated decline in CO emission rates. - Highest peak hour-volume intersections within the Study Area: multiway intersection of Woods Avenue, Beverly Boulevard, 3rd Street, and Pomona Boulevard (4,469 vehicles in the peak hour), and the multiway intersection of Atlantic Boulevard, Triggs Street, Goodrich Boulevard, Telegraph Road, and Ferguson Drive (4,442 vehicles in the peak hour). The percent increase in traffic at both peak intersections would be less than the percent decrease in anticipated CO emission rates between existing and future conditions. - The No Build Alternative would not involve any new large congregations of diesel-powered transit vehicles.
Operational emissions	No Adverse Effect	- Federal and state regulations for vehicle engines and fuels could cause overall mobile source air toxics emissions to decline significantly over the next several decades. - The magnitude of projected emission reductions is so great that mobile source air toxics emissions in the region would be expected to be lower than existing conditions in virtually all locations under the No Build Alternative

Source: Metro; CDM Smith/AECOM JV 2026.

Key: CO = carbon monoxide; NAAQS = National Ambient Air Quality Standard

3.2.3 Build Alternative

The Build Alternative would be consistent with the currently approved 2025 FTIP and 2024 RTP. The Build Alternative is identified in the 2025 FTIP Project Listing, approved by the Federal Highway Administration and FTA on December 16, 2024. The Build Alternative is identified as “Eastside Transit Corridor Phase 2 - Metro L Line (Gold) Eastside Extension from its terminus at Atlantic Station in East Los Angeles to eastern Los Angeles County” under FTIP Identification LA0G626 for the preliminary engineering and right-of-way phases and RTP Identification 1TR0704, which is consistent with the definition of the Build Alternative. Project funding is programmed under the current 2025 FTIP. Additional funding for future project phases will be programmed under the FTIP at a later date. The Build Alternative would not conflict with the 2025 FTIP and no long-term adverse effect would occur.

Peak hour traffic volumes under the Build Alternative at the two highest-volume intersections would increase from 4,150 to 4,514 and from 4,243 to 4,428 between 2025 and 2050, an 8.8 percent and 4.4 percent increase, respectively. The EMFAC2021 model including the November 2025 off-model adjustment factors provides regional vehicle aggregate CO running exhaust emission rates of 1.32 grams per mile and 0.85 grams per mile in 2025 and 2050, respectively. This 35.7 percent reduction in emission factors is driven by changes to the fleet mix

and the gradual phase-in of Federal and Environmental Protection Agency-approved California vehicle regulations. Since the percent reduction in emission rates between current conditions and the Build Alternative is greater than the percent increase to peak traffic volumes over the same period, there would be no potential for the Build Alternative to generate a CO hot-spot. Additionally, the light rail vehicles would be powered by electricity, not diesel fuel. The Build Alternative would not result in any new large congregations of diesel-powered transit vehicles and there would be no potential to generate a particulate matter hot-spot.

The Environmental Protection Agency guidance for Particulate Matter hot-spot analysis and interagency consultation were used to determine whether the Build Alternative is a Project of Air Quality Concern. Per the transportation conformity rules and regulations, all nonexempt projects must go through review by the Transportation Conformity Working Group (TCWG). On March 24, 2026, the TCWG determined that the Build Alternative is not a Project of Air Quality Concern. The Build Alternative was approved and concurred upon by interagency consultation at the TCWG meeting as a project not having adverse impacts on air quality, and the Build Alternative meets the requirements of the Clean Air Act and 40 Code of Federal Regulations 93.116. No long-term adverse effect would occur.

Operation of the four new stations under the Build Alternative would not directly emit criteria pollutants. The operational emission sources most affected by the Build Alternative would be regional traffic. The Build Alternative's reasonably foreseeable effect would be mode shift of some travelers in the Study Area to rail ridership, replacing vehicle trips and reducing the associated vehicular emissions. Since air quality is characterized at a regional scale and the rail system is a large and interconnected transportation network that extends beyond the Study Area, the Build Alternative-related ridership shift would reduce VMT within the South Coast Air Basin region more than would be seen just within the Study Area. These regional VMT reductions are therefore included in this evaluation. While electricity for MSF Sites 1, 2, and 3 would differ marginally as a result of the different site sizes, criteria pollutant emissions from operational activities would not be expected to differ if either MSF Site 1 or 2 is constructed. Due to the smaller footprint and reduced light rail vehicle car accommodation, MSF Site 3 would result in operational emissions that would be less than MSF Site 1 or 2. As shown in **Table 3.2-4** and **Appendix F**, emissions of all relevant criteria pollutants and precursors, except for volatile organic compounds, would be reduced as a result of the Build Alternative with MSF Site 1 or 2. While emissions of volatile organic compounds could increase as a result of the Build Alternative, this increase would be below SCAQMD regional emission thresholds and there would be no potential for the operational emissions of the Build Alternative to cause a new National Ambient Air Quality Standards violation or exacerbate an existing violation. Emissions of all relevant criteria pollutants and precursors, including volatile organic compounds, would be reduced as a result of the Build Alternative with MSF Site 3. Thus, the Build Alternative with MSF Site 1, 2, or 3 would have no long-term adverse effect.

Table 3.2-4 Build Alternative with MSF – Regional Total Annual Operational Emissions (Pounds per Day)

Alternative	Emission Source	VOC	CO	NOx	SO ₂	PM ₁₀	PM _{2.5}
Build Alternative (2050)	Regional Traffic	73,291	1,081,873	158,986	3,315	411,582	105,657
Build Alternative (2050)	MSF Site 1 or 2	4	<1	<1	<1	<1	<1
Build Alternative (2050)	MSF Site 3	<1	<1	<1	<1	<1	<1
Build Alternative (2050)	Parking Lot Maintenance and Parked Vehicle Fuel Evaporation	<1	--	--	--	--	--
—	Daily Build Alternative Total with MSF Site 1 or 2	73,295	1,081,873	158,986	3,315	411,582	105,657
—	Daily Build Alternative Total with MSF Site 3	73,291	1,081,873	158,986	3,315	411,582	105,657
No Build Alternative (2050)	Regional Traffic	73,292	1,081,888	158,988	3,315	411,588	105,659
—	Annual Total	73,292	1,081,888	158,988	3,315	411,588	105,659
Build Alternative with MSF minus No Build Alternative	Net Build Alternative Emissions with MSF Site 1 or 2 ¹	3	(15)	(2)	(<1)	(6)	(1)
Build Alternative with MSF minus No Build Alternative	Net Build Alternative Emissions with MSF Site 3 ¹	(1)	(15)	(2)	(<1)	(6)	(1)
Build Alternative with MSF minus No Build Alternative	SCAQMD Regional Significance Threshold	55	550	55	150	150	55
—	Exceeds Level	No	No	No	No	No	No

Source: CDM Smith/AECOM JV 2026.

Note:

¹ Emission reductions (beneficial impacts) are shown in parentheses.

Key: MSF = maintenance and storage facility; VOC = volatile organic compounds; CO = carbon monoxide; NOx = nitrogen oxides; SO₂=sulfur dioxide; PM₁₀ = Particulate Matter of 10 Microns in Diameter and Smaller; PM_{2.5} = Particulate Matter of 2.5 Microns in Diameter and Smaller; < = less than

Operation of the Build Alternative, regardless of MSF site selection, would not cause adverse air quality effects and would provide net air quality benefits on all criteria pollutants (other than volatile organic compounds) through reduced regional emissions and decreased reliance on automobile travel due to increased availability of, and anticipated mode shift of a subset of Study Area travelers to, light rail transit. The negligible increase in emissions of volatile organic compounds would be below SCAQMD regional emission thresholds. Thus, the Build Alternative would have no long-term adverse effect.

3.2.4 Avoidance, Minimization, and Mitigation Measures for the Build Alternative

The measures identified in **Table 3.2-5** would be implemented for the Build Alternative in the long term. Construction measures are provided in **Section 3.17**.

Table 3.2-5 Long-Term Avoidance, Minimization, and Mitigation Measures

Topic	Project Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
Consistency with 2025 Federal Transportation Improvement Program (FTIP) and 2024 Regional Transportation Plan (RTP)	The Build Alternative would be consistent with the currently approved 2025 FTIP and 2024 RTP	No avoidance, minimization, or mitigation measures needed	None	No Adverse Effect
Carbon monoxide hot-spot	No potential for the Build Alternative to generate a carbon monoxide hot-spot	No avoidance, minimization, or mitigation measures needed	None	No Adverse Effect
Particulate matter hot-spot	No potential for the Build Alternative to generate a particulate matter hot-spot	No avoidance, minimization, or mitigation measures needed	None	No Adverse Effect
Operational emissions	Operation of the Build Alternative, regardless of MSF site selection, would not cause adverse air quality effects and would provide net air quality benefits on all criteria pollutants (other than volatile organic compounds) through reduced regional emissions and decreased reliance on automobile travel. The negligible increase in emissions of volatile organic compounds would be below SCAQMD regional emission thresholds.	No avoidance, minimization, or mitigation measures needed	None	No Adverse Effect

Source: CDM Smith/AECOM JV 2026.

3.3 Biological Resources

This section evaluates the potential long-term effects of the No Build Alternative and the Build Alternative on biological resources. Short-term construction effects are discussed in **Section 3.17** (Construction).

The assessment of reasonably foreseeable effects in this section is based upon the temporal proximity parameters detailed in **Chapter 3.0** (Introduction), and the geographic proximity parameters detailed in **Section 3.3.1** (Affected Environment).

3.3.1 Affected Environment

Biological Resources Study Area

- **Build Alternative Buffer:** 500-foot buffer from the alignment, stations, railroad system facilities, construction staging areas, Maravilla Crossover, and MSF site options (See **Figure 3.3-1**)
 - Focuses on the immediate vicinity of where project activities are occurring, where biological resources impacts typically occur

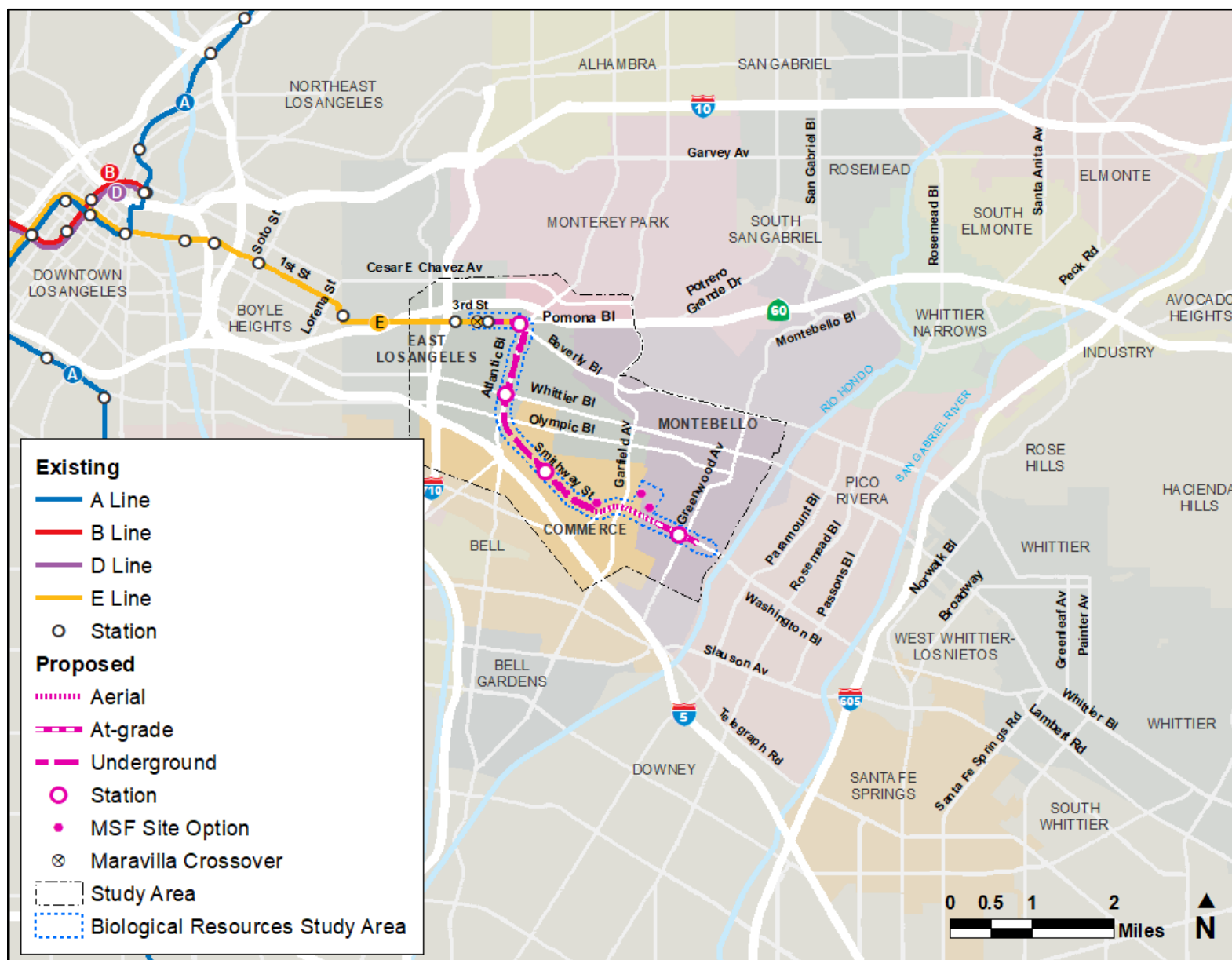
The United States Fish and Wildlife Service Information for Planning and Consultation (IPaC) tool was used to generate a list of federally listed species with potential to occur in the Biological Resources Study Area. The IPaC tool identifies any designated critical habitat for federally listed species (United States Fish and Wildlife Service 2026). The California Natural Diversity Database (CNDDDB) was also used to identify federally listed plants and animals with the potential to occur in the Biological Resources Study Area (California Department of Fish and Wildlife 2025). Results of the IPaC and CNDDDB searches are provided in **Appendix G** (Biological Resources Database Search Results).

The identification of tree species, vegetation communities, and current site conditions within the Biological Resources Study Area is based on tree surveys and site visits conducted in 2025 and the results of prior surveys conducted along the Project alignment since 2019. These surveys and site visits utilized field observations from the right-of-way and aerial imagery. **Section 3.3.1.2** describes the findings in detail.

3.3.1.1 Federally Listed Species

Federally listed species include wildlife and plant species listed as threatened, endangered, and/or proposed for listing. Using IPaC and CNDDDB data, ten federally listed species were identified as having the potential to occur within the Biological Resources Study Area (**Table 3.3-1**). The potential occurrence of each species was evaluated based on the presence of suitable habitat. The Biological Resources Study Area is developed with minimal vegetation and contains no surface waters, wetlands, or floodplains as discussed in **Section 3.10** (Water Resources).⁹ Photographs of existing conditions are provided in **Section 3.8** (Visual Resources). No federally listed species, suitable habitat, critical habitat, or proposed critical habitat were identified during the survey, site visits, or the desktop review. Full database search results are provided in **Appendix G**.

⁹ The Magnuson-Stevens Fishery Conservation and Management Act does not apply because the Biological Resources Study Area is not mapped within or adjacent to the boundaries of any Essential Fish Habitat (National Marine Fisheries Service 2026).



Source: Metro; CDM Smith/AECOM JV 2026.

Figure 3.3-1 Biological Resources Study Area

Table 3.3-1 Federally Listed Wildlife and Plant Species Potentially in the Biological Resources Study Area

Common Name	Scientific Name	Status	Potential to Occur in the Study Area
Slender-horned spineflower	<i>Dodecahema leptoceras</i>	Federally Endangered	No potential to occur. Suitable habitat includes sandy and gravelly soils within alluvial scrub (United States Fish and Wildlife Service 2022). These conditions do not occur within the Biological Resources Study Area.
Nevin's barberry	<i>Mahonia nevinii</i>	Federally Endangered	No potential to occur. Suitable habitat includes sandy and gravelly washes, alluvial terraces, canyon bottoms, and steep slopes (United States Fish and Wildlife Service 2009). These conditions do not occur within the Biological Resources Study Area.
California Orcutt grass	<i>Orcuttia californica</i>	Federally Endangered	No potential to occur. Suitable habitat includes vernal pools and wetlands (California Department of Fish and Wildlife 2025). These conditions do not occur in the Biological Resources Study Area.
Coastal California gnatcatcher	<i>Poliophtila californica</i>	Federally Threatened	No potential to occur. Suitable habitat includes coastal bluff scrub and coastal scrub (California Department of Fish and Wildlife 2025). These conditions do not occur within the Biological Resources Study Area.
Least Bell's vireo	<i>Vireo bellii pusillus</i>	Federally Endangered	No potential to occur. Suitable habitat includes riparian forests, riparian scrub, and riparian woodlands (California Department of Fish and Wildlife 2025). These conditions do not occur within the Biological Resources Study Area.
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	Federally Endangered	No potential to occur. Suitable habitat includes riparian woodlands, which do not occur within the Biological Resources Study Area (California Department of Fish and Wildlife 2025).
Western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	Federally Threatened	No potential to occur. Suitable habitat includes riparian forests, which do not occur within the Biological Resources Study Area (California Department of Fish and Wildlife 2025).
Southwestern pond turtle	<i>Actinemys pallida</i>	Proposed Threatened	No potential to occur. Suitable habitat includes aquatic habitat (e.g., ponds, lakes), adjacent upland habitat, and basking sites (e.g., shorelines and substrate near aquatic habitat) (United States Fish and Wildlife Service 2023). These conditions do not occur within the Biological Resources Study Area.

Common Name	Scientific Name	Status	Potential to Occur in the Study Area
Western Spadefoot	<i>Spea hammondi</i>	Proposed Threatened	No potential to occur. Suitable habitat includes woodlands, coastal scrub, grasslands, vernal pools, and wetlands (California Department of Fish and Wildlife 2025). These conditions do not occur within the Biological Resources Study Area.
Monarch butterfly	<i>Danaus plexippus</i>	Proposed Threatened	No potential to occur. Requires flower-rich meadows and grasslands, with significant populations of milkweed for host plants in larval stages, as well as over wintering tree groves (United States Fish and Wildlife Service 2024b). These conditions do not occur within the Biological Resources Study Area.

Source: United States Fish and Wildlife Service 2009, 2022, 2023, 2024b, 2026; California Department of Fish and Wildlife 2025.

3.3.1.2 Migratory Birds and Vegetation

Based on surveys and site visits described in **Section 3.3.1**, the Biological Resources Study Area is primarily developed and lacks distinct vegetation communities. Most trees occur as individual street trees and do not form a canopy.¹⁰ Understory vegetation also occurs as sparse plantings, isolated in street medians or sidewalks. Tree survey data, site visit observations, and aerial imagery indicate that approximately 650 trees occur along the Build Alternative alignment and construction staging areas. Additionally, approximately 165 trees are within MSF Site 1, 270 trees are within MSF Site 2, and 20 trees are within MSF Site 3. The tree species that were identified within the Biological Resources Study Area are primarily ornamental species such as jacaranda (*Jacaranda mimosifolia*), palms (family Arecaceae), and eucalyptus (*Eucalyptus* spp.). Native trees occur only sparsely and consist mainly of species such as sycamore (*Platanus racemosa*) and oak (*Quercus* spp.). Understory vegetation is primarily ornamental species such as turf grass and box hedges and does not form distinct vegetation communities.

Because of the lack of distinct vegetation communities and density of urban development, the vegetation that occurs within the Biological Resources Study Area provides only limited habitat for migratory birds. However, migratory birds still have potential to occur and use existing street trees and understory shrubs as nesting habitat. Both native and ornamental vegetation can serve as suitable nesting habitat for migratory birds.

3.3.2 No Build Alternative

The No Build Alternative, as described in **Section 2.2** of the EA, would include already planned and funded roadway and transit projects but would not provide a rail transit option for communities in eastern Los Angeles County. As shown in **Table 3.3-2**, the No Build Alternative would have no effect on federally listed species and no long-term adverse effect on migratory birds or related to the spread of invasive species or pathogens.

¹⁰ Individual street trees were not considered a vegetation community unless they were grouped together to form a canopy.

Table 3.3-2 Biological Resources Impact Summary – No Build Alternative

Topic	Impact	Rationale
Federally Listed Species	No Effect	The Biological Resources Study Area is highly developed and does not support habitat or critical habitat for federally listed species
Migratory Birds	No Adverse Effect	Already planned regional transit and roadway projects would be required to comply with the MBTA and local tree protection policies and undergo separate environmental reviews to determine environmental effects and mitigation, as necessary
Invasive species or pathogens	No Adverse Effect	Use of equipment for planned transit and roadway projects could spread invasive plant seeds or tree diseases in exposed soil or vegetation. However, these projects would primarily occur within developed and paved areas with limited to no natural areas

Source: Metro; CDM Smith/AECOM JV 2026.

Key: MBTA = Migratory Bird Treaty Act

3.3.3 Build Alternative

As discussed in **Section 3.3.1**, the Biological Resources Study Area does not support habitat or critical habitat for federally listed species as it is highly developed. Thus, there would be no long-term effect on federally listed species from the Build Alternative.

Disturbing vegetation during the bird nesting season could disrupt migratory bird nesting activities. However, long-term vegetation disturbance would primarily be from tree trimming, which is expected to be minimal. Additionally, the Build Alternative would comply with the Migratory Bird Treaty Act, which protects against the take of migratory birds. Therefore, there would be no long-term adverse effect on migratory birds.

As discussed in **Section 3.3.1.2**, no vegetation communities exist within the Biological Resources Study Area and vegetation along the alignment is sparse. Any tree-related maintenance activities under the Build Alternative would comply with the Metro Tree Policy and local tree protection policies, which include provisions for tree protection. Therefore, the Build Alternative would not have long-term adverse effects on vegetation.

Equipment used for maintenance has the potential to transport invasive plant seeds if used in areas of exposed soil and spread tree disease pathogens. However, the majority of areas that could be affected by the Build Alternative consist of structures, roads, and other hardscaped areas. Further, the majority of street trees along the alignment are isolated from each other and therefore less susceptible to insect pests and tree disease pathogens (Garcia et al 2022). Thus, the Build Alternative would have no long-term adverse effects related to the spread of invasive species or tree disease pathogens.

3.3.4 Avoidance, Minimization, and Mitigation Measures for the Build Alternative

The measures identified in Table 3.3-3 would be implemented for the Build Alternative in the long term. Construction measures are provided in **Section 3.17**.

Table 3.3-3 Long-Term Avoidance, Minimization, and Mitigation Measures

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
Federally Listed Species	No Effect as Biological Resources Study Area does not provide suitable habitat for federally listed species	No avoidance, minimization, or mitigation measures needed	None	No Effect
Migratory Birds	Build Alternative would comply with the Migratory Bird Treaty Act and long-term vegetation disturbance would be minor	No avoidance, minimization, or mitigation measures needed	None	No Adverse Effect
Vegetation	Vegetation within the Biological Resources Study Area is sparse and Build Alternative would comply with Metro Tree Protection Policy and local ordinances	No avoidance, minimization, or mitigation measures needed	None	No Adverse Effect
Invasive species and pathogens	Equipment could transport invasive plant seeds and tree disease pathogens; however, the Biological Resources Study Area is developed with minimal vegetation and there is very limited potential for spreading invasive species or tree pathogens	No avoidance, minimization, or mitigation measures needed	None	No Adverse Effect

Source: CDM Smith/AECOM JV 2026.

3.4 Community Impacts

This section evaluates the potential long-term effects of the No Build Alternative and the Build Alternative on community cohesion, community facilities, and public services effects, as detailed in **Appendix H** (Community Impacts Assessment). Short-term construction effects are discussed in **Section 3.17** (Construction).

The assessment of reasonably foreseeable effects in this section is based upon the temporal proximity parameters detailed in **Chapter 3.0** (Introduction) and the geographic proximity detailed in **Section 3.4.1** (Affected Environment).

3.4.1 Affected Environment

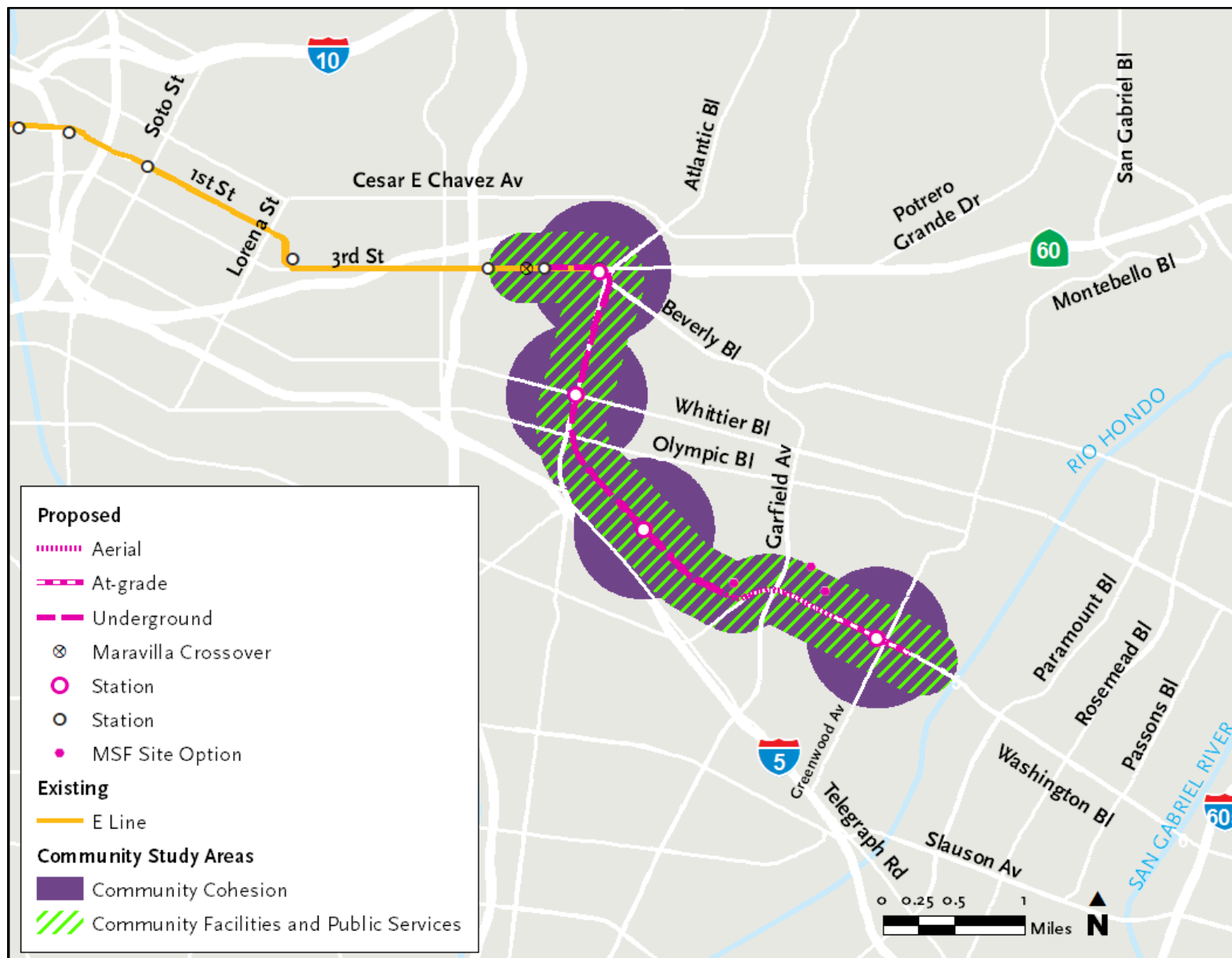
Community Impacts Study Areas

- **Community Cohesion:** 0.5-mile buffer around proposed stations and 0.25-mile buffer along the alignment
 - Accounts for the broader influence that transit stations typically have on surrounding land uses
 - Evaluates effects on neighborhood continuity (unplanned growth, displacement, and quality of life for communities); physical character (incompatible land use, visual changes, community division, and acquisition/separation of community facilities); and access and mobility (loss of access, impaired mobility, and disrupted circulation patterns for communities)
- **Community Facilities and Public Services:** 0.25-mile buffer along the Build Alternative alignment
 - Focus on where physical and long-term impacts to community facilities and public service structures are most likely to occur
 - Evaluates impacts on parks and multi-use trails; fire stations, police stations, and emergency services; schools and daycares; and public facilities and local resources, including libraries, museums, places of worship, cemeteries, social services, and other important community resources (e.g., shopping centers)

Figure 3.4-1 displays the Community Impacts Study Areas. Community resource regulations applicable to the Project are summarized in **Appendix S** (Regulatory Setting Summary) and detailed in **Appendix H**. A review of United States Census Bureau data, Southern California Association of Governments plans and demographic data, Los Angeles Enterprise Geographic Information Systems (GIS) data, field observations, official zoning maps, aerial imagery, and local general plans and site visits and reconnaissance were conducted for this evaluation.

Since 2007, Metro has conducted extensive outreach across all project phases, engaging diverse stakeholders from federal agencies to local neighborhood councils. For more information, see **Chapter 5.0** (Public Involvement) and **Appendix Q** (Public Outreach Report) of this EA. Project history and the Build Alternative selection are detailed in **Figure 2.1** in **Chapter 2.0** (Description of Alternatives), of the EA. Key outreach activities have included:

- **Public Scoping:** Extensive engagement during the Alternatives Analysis and CEQA reviews to gather input on project alternatives and community priorities.
- **2025 Community Updates:** Targeted meetings in 2025 in East Los Angeles, Commerce, and Montebello addressing construction impacts, Americans with Disabilities Act access, business displacement, and safety.
- **Continuous Engagement:** Ongoing Technical Advisory Committee meetings, multilingual communications, and hybrid forums.
- **Comment Integration:** Relevant feedback from the 2024 EIR has been incorporated into the EA.



Source: Metro; CDM Smith/AECOM JV 2026.

Figure 3.4-1 Community Impacts Study Areas

3.4.1.1 Neighborhood Continuity

Neighborhood continuity in the Community Cohesion Study Area is defined by age, household characteristics, employment characteristics, local planning priorities major employers and industries, and major activity centers. Population, household, employment, and age data is provided in **Table 3.4-1**.

Table 3.4-1 Population, Household, and Employment Characteristics of the Community Cohesion Study Area

Category	Statistic
Total Population (0.25 mile from Build Alternative alignment)	89,546 persons
Total Population (0.5 mile from proposed stations)	69,588 persons
Total Households (0.25 mile from Build Alternative alignment)	24,480 households
Total Households (0.5 mile from proposed stations)	19,399 households
Total Civilian Employed Population 16 Years and Over (0.25 mile from Build Alternative alignment)	42,129 employed
Total Civilian Employed Population 16 Years and Over (0.5 mile from proposed stations)	41,269 employed
Median Age ¹	35 years
Seniors (percent of Population 65+) ¹	13 percent
Poverty Level (percent of Households) ¹	16 percent
No Private Vehicle (percent of Households) ¹	10 percent

Source: United States Census Bureau 2022.

Note:

¹ Applies to both 0.25 mile from the Build Alternative alignment and 0.5 mile from the proposed stations (i.e., no meaningful difference between these two areas).

The data shown in **Table 3.4-1** suggests the Community Cohesion Study Area is a well-populated, urbanized area with a need for public transit access.

Local planning priorities are defined as outcomes a community prioritizes to improve quality of life for residents. Local planning priorities are summarized at the jurisdictional level, based on a review of local general plans and past outreach efforts for East Los Angeles and the Cities of Commerce and Montebello. See **Appendix H** for additional details. **Table 3.4-2** summarizes the local planning priorities of East Los Angeles, Commerce, and Montebello, including community feedback and concerns voiced during the 2025 community meetings. See **Appendix Q** for additional details.

Table 3.4-2 Local Planning Priorities for the Community Cohesion Study Area

Community	Local Planning Priorities	2025 Meeting Feedback and Concerns
East Los Angeles	Clean air, more greenspace, accessibility, and reduced impacts from freeways and industrial uses (Los Angeles County 2024a)	- Support for accelerated construction timeline - Suggested additional station at Atlantic Boulevard and 6th Street - Concerns: construction disruptions, Americans with Disabilities Act compliance, business impacts, funding availability, safety, and traffic
Commerce	Redevelopment of underutilized properties, improved access for businesses along Washington Boulevard, and reduced health hazards associated with hazardous materials (City of Commerce 2008)	- Inquired about safety measures for proposed Commerce/Citadel station - Concerns: construction, property acquisitions, noise, potential vibration damage, design integrity, and availability of federal funding

Community	Local Planning Priorities	2025 Meeting Feedback and Concerns
Montebello	Safety, economic development, parks and recreation, housing affordability, access to resources (City of Montebello 2024)	- Inquired about the rationale of the alignment along Washington Boulevard - Inquired about the alignment being at-grade instead of underground in Montebello - Concerns: traffic congestion, reduced traffic lanes, parking impacts, safety and noise concerns, and potential impacts to jobs and sales tax revenue from construction of the MSF

Source: Los Angeles County 2025; Los Angeles County 2024a; City of Commerce 2008; City of Montebello 2024.

Table 3.4-3 identifies major employers and industries within the Community Cohesion Study Area. Data is also provided for the Cities of Commerce and Montebello, East Los Angeles, and Los Angeles County for regional comparison. In each of the analyzed geographies, educational services, and health care and social assistance was the largest industry sector in terms of employment.

Table 3.4-3 Major Employers and Industries in the Community Cohesion Study Area

Economic Sector	Los Angeles County	City of Commerce	City of Montebello	East Los Angeles	0.25 mile of Alignment	0.5 mile of Proposed Stations
Agriculture, Forestry, Fishing and Hunting, and Mining	0.5 %	0.9%	0.7%	0.8%	0.6%	0.5%
Construction	6.2%	8.0%	6.2%	10.4%	9.3%	9.4%
Manufacturing	8.7%	11.2%	9.9%	12.5%	11.5%	11.0%
Wholesale Trade	3.1%	5.3%	3.7%	4.5%	5.2%	5.0%
Retail Trade	10.0%	13.6%	12.0%	12.2%	12.0%	12.8%
Transportation and Warehousing, and Utilities	6.5%	9.0%	8.7%	9.5%	9.7%	9.3%
Information	4.4%	0.2%	1.0%	0.9%	0.9%	0.9%
Finance and Insurance, and Real estate and rental and leasing	5.9%	6.7%	5.5%	2.8%	4.9%	4.4%
Professional, scientific, and management, and administrative and waste management services	13.5%	7.7%	9.4%	10.0%	7.8%	8.4%
Educational services, and health care and social assistance	21.4%	19.0%	22.7%	17.2%	19.9%	19.4%
Arts, entertainment, and recreation, and accommodation and food services	10.7%	10.7%	9.8%	10.1%	9.2%	9.5%
Other services, except public administration	5.5%	3.7%	6.3%	5.3%	5.4%	5.7%
Public administration	3.6%	4.0%	4.2%	3.8%	3.5%	3.7%

Source: United States Census Bureau 2022.

Key: % = percent; **bold text** = highest percentage

Activity centers are areas where clusters of economic, social, and civil activity occur, as well as key infrastructure assets. Activity centers in the region are listed in **Table 3.4-4**. Eleven identified major activity centers are in the Community Cohesion Study Area, the majority of which are community facilities and other public facilities.

Table 3.4-4 Major Activity Centers in the Community Cohesion Study Area

Name	Address	City	Type	Distance from the Build Alternative (feet)
Atlantic Avenue Park	Atlantic Boulevard	East Los Angeles	Parks	30
Belvedere Park Lake	3rd Street and La Verne Avenue	Los Angeles	Parks	50
City of Montebello Municipal Services Department - Parks and Recreation Division - Chet Holifield Park Community Center	1060 Greenwood Avenue	Montebello	Parks/Golf Course	425
East Los Angeles Administration Center	4848 Civic Center Way	East Los Angeles	Courthouse Government Offices	350
East Los Angeles Courthouse	214 Fetterly	Los Angeles	Courthouse	350
Eastmont Community Center	701 Hoefner Avenue	Los Angeles	Community Services	2,015
Enki - Youth and Family Services - Margarita Mendez Center	1000 Goodrich Boulevard	City of Commerce	Hospitals	950
Los Angeles County Community and Senior Services - Centro Maravilla Service Center	4716 Cesar East Chavez Avenue	Los Angeles	Community Services	2,390
Los Angeles County Superior Court - Central District - East Los Angeles Courthouse	4848 Civic Center Way	Los Angeles	Courthouse	350
The Citadel Outlets Shopping Center	100 Citadel Drive	Commerce	Shopping Centers	25
Woods Avenue Park	Woods Avenue and Verona Street	East Los Angeles	Parks/Golf Course	375

Source: Los Angeles County 2024b.

The communities within the Community Cohesion Study Area are established communities that generally have experienced relative stability. Forecasted growth conditions for the Community Cohesion Study Area, the Cities of Commerce and Montebello, East Los Angeles, and Los Angeles County show a slower rate of growth in population, households, and employment between 2025 and 2050 than the larger Southern California Association of Governments six-county area (Southern California Association of Governments 2024b). These forecasts indicate that the primary areas of growth for the Southern California Association of Governments six-county area would be located outside of the Community Cohesion Study Area.

3.4.1.2 Physical Character

Information on the physical character of the Community Cohesion Study Area is based on site visits and a review of local general plans and land use and zoning maps for the Cities of Commerce and Montebello and East Los Angeles.

The Community Cohesion Study Area is characterized by a primarily built-out, diverse, and topographically flat urban environment that encompasses land use types typically found in mature urban and suburban communities. Most multi-family residential land uses in the Community Cohesion Study Area are generally

located in East Los Angeles. Business and industrial parks are concentrated in the City of Commerce. Commercial uses in the Community Cohesion Study Area range from neighborhood/main street retail to the large regional Citadel shopping mall and Commerce Center mall. Residential uses represent the largest share of land use within 0.5 mile of the proposed stations except for the Commerce/Citadel station, for which the largest share of land use is industrial. The MSF and lead tracks to the MSF are within and surrounded by industrial uses such as manufacturing and assembly and warehouses. Additional details about land uses and historic Section 4(f) resources in the Community Cohesion Study Area are provided below. In addition, Section 4(f) resources in the Community Cohesion Study Area are identified and discussed in greater detail in **Chapter 4.0** (Section 4[f] Properties) and **Appendix N** (Section 4[f]) Evaluation) of this EA. **Table 3.4-5** summarizes information on the physical character of East Los Angeles, Commerce, and Montebello.

Table 3.4-5 Physical Character of the Community Cohesion Study Area

Community	Description of Physical Character
East Los Angeles	- Primarily residential (low- to medium-density housing) - Commercial development confined to major vehicular corridors (e.g., Atlantic Boulevard) - Retained community cohesion despite proximity to four major freeways: State Route 60, Interstate 5, Interstate 10, and Interstate 710 - Large civic center complex and park - Historic Section 4(f) resources: Golden Gate Theater, Griffith STEAM Magnet Middle School, National Chicano Moratorium March site
Commerce	- Primarily industrial (warehouses, light and heavy manufacturing facilities, freight yards, and other industrial uses) - Planning efforts have provided buffers between dissimilar land uses, lessening the potential for conflicts between residential and industrial uses - Historic Section 4(f) resources: Vail Field Industrial Addition – historic district, the Pacific Metals Company building, the Goodyear Tire and Rubber Company Warehouse, and the E.F. Hauserman Company Building
Montebello	- Primarily commercial, confined to major vehicular corridors (e.g., Washington Boulevard) - Public and private institutional spaces located throughout the community - Low-density multi-family residential situated along major arterial streets - Open space and residential neighborhoods concentrated in the northern area; industrial development concentrated in the southern area - Historic Section 4(f) resources: Greenwood Elementary School, the South Montebello Irrigation District building, and the William and Florence Kelly House

Source: City of Montebello 2024a; Los Angeles County 1988; Los Angeles County 2024b; City of Commerce 2008.

3.4.1.3 Access and Mobility

The roadway infrastructure in the Community Cohesion Study Area frequently becomes congested, including during off-peak hours, which limits mobility for motorists. Buses are frequently delayed in the same arterial street congestion as automobiles. Although unaffected by automobile congestion, Metrolink rail service within the Community Cohesion Study Area is infrequent, with limited service during mid-day and weekend periods.

Existing physical divisions between communities in the Community Cohesion Study Area include State Route 60, Interstate 5, and the Union Pacific Railroad/Metrolink Riverside Line. These sites are difficult to cross on foot and effectively separate the communities on either side. Although a network of bicycle routes exists along a few portions of the local arterial streets in East Los Angeles, and several new bicycle routes are proposed which would intersect the Community Cohesion Study Area, the majority of urban spaces within the Community Cohesion Study Area are tailored to automobile use and configured in a way that is inhospitable to pedestrians. Additionally, the distances between major bus routes and Metrolink stations, large residential tracts, and non-pedestrian urban form serve as an obstacle for pedestrians and bicyclists.

3.4.1.4 Community Facilities and Public Services

Table 3.4-6 identifies the community facilities and public services within the Community Facilities and Public Services Study Area and **Figure 3.4-2** shows their locations. The parks and recreational facilities closest to the Build Alternative alignment are Belvedere Park Lake on 3rd Street and Atlantic Avenue Park on Atlantic Boulevard. There are no multi-use trails within the Community Facilities and Public Services Study Area. However, **Table 3.4-6** identifies multi-use trails outside of the Community Facilities and Public Services Study Area but within the greater region. Parks and recreations areas protected by Section 4(f) are noted in **Table 3.4-6** and discussed further in **Chapter 4.0** of this EA.

Fire prevention, protection, and emergency medical services in the Community Facilities and Public Services Study Area are provided by the Los Angeles County Fire Department in East Los Angeles (unincorporated Los Angeles County) and the City of Commerce (Los Angeles County Fire Department 2021). The Montebello Fire Department provides these services in the City of Montebello (City of Montebello Fire Department 2023). Law enforcement, police services, and civil processes in the Community Facilities and Public Services Study Area are provided by the Los Angeles County Sheriff's Department in East Los Angeles (unincorporated Los Angeles County) and the City of Commerce. The Montebello Police Department provides these services in the City of Montebello. The Los Angeles County Fire Department Fire Station 50 located at Saybrook Avenue in the City of Commerce and the Los Angeles County Sheriff's Department - East Los Angeles (unincorporated Los Angeles County) located on 3rd Street in East Los Angeles are the closest facilities to the Build Alternative alignment.

Several public and private schools are located near or adjacent to the alignment as identified in **Table 3.4-6**, including KIPP Raices Academy, 4th Street Primary Center, and Esperanza College Prep. Public facilities within the Community Facilities and Public Services Study Area include Chet Holifield Library, East Los Angeles Library, and Los Angeles County East Los Angeles Civic Center. The Citadel Outlets mall is identified as a local resource.

Table 3.4-6 Community Facilities and Public Services within the Community Facilities and Public Services Study Area

Map ID	Type	Name	Address	Jurisdiction	Distance from the Alignment (feet)
1	Park	Belvedere Park Lake ¹	3rd Street and La Verne Avenue	Los Angeles	50
2	Park	Atlantic Avenue Park ¹	570 Atlantic Boulevard	Los Angeles	30
3	Park	Woods Avenue Park ¹	Verona Street and Woods Avenue	Los Angeles	375
4	Park	Chet Holifield Park and Community Center ¹	1060 Greenwood Avenue	Montebello	425
5	Multi-Use Trail	Rio Hondo Spreading Grounds and Multi-Use Trails ¹	Not available	Pico Rivera	1,600
6	Multi-Use Trail	San Gabriel River Spreading Grounds and Multi-Use Trails ¹	Not available	Pico Rivera	11,616 (2.2 miles)
7	Fire Station	Los Angeles County Fire Department - Station Number 50	2327 Saybrook Avenue	Commerce	1,065
8	Fire Station	Montebello Fire Department – Station Number 2	1166 Greenwood Avenue	Montebello	1,475
9	Police Station	Los Angeles County Sheriff's Department - East Los Angeles	5019 3rd Street	Los Angeles	100
10	Public Charter High School	Esperanza College Prep	414 Atlantic Boulevard	Los Angeles	45
11	Public Elementary	4th Street Elementary	420 Amalia Avenue	Los Angeles	345
12	Public Elementary	4th Street Primary Center	469 Amalia Avenue	Los Angeles	45
13	Public Charter	Learn4Life – East LA – Alta Vista Innovation High School	5301 Whittier Boulevard	Los Angeles	420
14	Public Charter	New Opportunities Charter School (East LA)	5301 Whittier Boulevard 3rd floor	Los Angeles	450
15	Public Charter	Arts in Action Elementary	5115 Via Corona Street	East Los Angeles	180
16	Public Charter	SIATech Academy South	255 Mednik Avenue	Los Angeles	40
17	Public Middle	Griffith STEAM Magnet	4765 Fourth Street	Los Angeles	250
18	Public High	Monterey Continuation	466 Fraser Avenue	Los Angeles	340
19	Public High	James A. Garfield	5101 Sixth Street	Los Angeles	350
20	Public Charter	KIPP Raices Academy	668 Atlantic Boulevard	Los Angeles	40

Map ID	Type	Name	Address	Jurisdiction	Distance from the Alignment (feet)
21	Public Charter	KIPP Promesa Prep	5156 Whittier Boulevard	Los Angeles	150
22	Private	Saint Alphonsus School	552 Amalia Avenue	Los Angeles	350
23	Public Pre-School	4th Street Early Education	421 Hillview Avenue	Los Angeles	360
24	Private	Calvary Chapel Christian Academy	931 Maple Avenue	Montebello	235
25	Public Elementary	Greenwood Elementary	900 Greenwood Avenue	Montebello	475
26	Library	Chet Holifield Library	1060 Greenwood Avenue	Montebello	650
27	Library	East Los Angeles Library	4837 3rd Street	Los Angeles	60
28	Governmental	Los Angeles County East Los Angeles Civic Center	4848 Civic Center Way	Los Angeles	350
29	Commercial	The Citadel Outlets Mall	100 Citadel Drive	Commerce	75

Source: Los Angeles County 2024b.

Note:

¹ Park and recreation area protected by Section 4(f).



Source: Metro; CDM Smith/AECOM JV 2026.

Figure 3.4-2 Parks, Multi-Use Trails, and Other Community Facilities

3.4.2 No Build Alternative

The No Build Alternative, as described in **Section 2.2** (No Build Alternative) of the EA, would include already planned and funded roadway and transit projects but would not provide a rail transit option for communities in eastern Los Angeles County. The No Build Alternative would not result in property acquisitions, business or residential displacement, unplanned population or employment growth, or changes to the neighborhood continuity and physical character of the Community Cohesion Study Area. Because existing and funded projects follow local land-use plans, the No Build Alternative avoids creating physical barriers or incompatible land uses.

However, the No Build Alternative would lead to adverse effects on access and mobility. According to Metro's 2020 L RTP, traffic congestion would continue to worsen without the Build Alternative's added capacity. While the No Build Alternative would avoid direct physical impacts on parklands, it would fail to meet General Plan goals for improved transit access and would likely hinder public access to recreational and community facilities due to increasing traffic. Overall, as shown in **Table 3.4-7**, the No Build Alternative would worsen access and mobility in the Study Area, and would result in a long-term adverse community effect.

Table 3.4-7 Community Impacts of the No Build Alternative

Topic	Impact	Rationale
Neighborhood Continuity and Physical Character	No Adverse Effect	- No displacements, acquisitions, or unplanned population or employment growth. - Would not degrade existing quality of life, increase urbanization or isolate communities. - Would not create physical barriers, or introduce incompatible land uses.
Access and Mobility	Adverse Effect	- Increasing traffic congestion and lack of new transit capacity. - Would not increase access.
Community Facilities and Public Services (Parks, Corridor Recreation, and Facilities)	Adverse Effect	Reduced accessibility due to congestion; would not meet transit goals.

Source: Metro; CDM Smith/AECOM JV 2026.

3.4.3 Build Alternative

The Build Alternative would benefit communities by expanding transit opportunities in eastern Los Angeles County, providing a transportation alternative to local and arterial roadways during periods of congestion, improving quality of life by enhancing mobility and access options, and serving a population with high transit demand. As detailed in **Table 3.4-8** and **Appendix H**, the Build Alternative would result in no long-term adverse effects on neighborhood continuity, physical character, parks, multi-use trails, and other community facilities, and no NEPA project measures (NPM) or NMM would be required. With implementation of NMM TRA-1 (Garfield Avenue and Washington Boulevard Intersection), long-term adverse effects on access and mobility would be reduced to not adverse. With implementation of NPM TRA-1, NPM TRA-3 (Operational Best Management Practices for the MSF Regarding Transportation), and NPM EFI-1 (Metro Joint Development Program and Metro Pilot Local Hiring Initiative), there would be no long-term adverse effects on access and mobility.

3.4.4 Avoidance, Minimization, and Mitigation Measures for the Build Alternative

The measures identified in **Table 3.4-9** would be implemented for the Build Alternative in the long term. Construction measures are provided in **Section 3.17**.

Table 3.4-8 Long-Term Impacts

Resource	Topic	Impact Determination (Before Mitigation)	Rationale	Project Measures and/or Mitigation	Impact Determination (After Mitigation)
Community Cohesion	Neighborhood Continuity	No Adverse Effect	The Build Alternative would not adversely affect neighborhood continuity: ▪ No Unplanned Growth: The Build Alternative would not construct new housing or businesses, displace existing housing, or induce unplanned population growth. ▪ Business Relocation: The Build Alternative would require acquisition of commercial and industrial properties; however, Metro will provide relocation services and payments per the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970. ▪ Transit Oriented Communities (TOC): Temporary construction sites may be used for long-term joint development or parking facilities; Under NPM EFI-1, Metro would ensure these developments would be evaluated for possible affordable housing development or transit supportive land use, in alignment with housing and economic goals through standards planning reviews. ▪ Local Job Creation: MSF Sites 1 and 2 would create up to 350 new jobs. MSF Site 3 is smaller and would employ fewer people. Per local requirements, employment opportunities would be offered to the existing community, preventing unplanned population shifts. ▪ Enhanced Connectivity: The Build Alternative would reduce congestion, decrease community isolation, and improve mobility for transit dependent residents. ▪ Consistency with Local Planning Priorities: The Build Alternative would improve transit access to businesses along Washington Boulevard and other community resources, provide net air quality benefits (see Section 3.2), and generate economic benefits for the Southern California region (see Section 3.6).	NPM EFI-1	No Adverse Effect
Community Cohesion	Physical Character	No Adverse Effect	The Build Alternative would not adversely affect physical character: ▪ Business Relocation: The Build Alternative would require full and partial permanent acquisition of commercial and industrial properties. Lead tracks to MSF Site 2 would require the full acquisition of the union headquarters for Bakers Local 37 at the corner of Washington Boulevard and Yates Avenue. Metro would provide relocation services and payments per the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, and access to these resources at a new location would be maintained in the long term. These acquisitions would not impact access, physically divide established communities, alter neighborhood boundaries, or isolate these properties from their communities. ▪ Physical Character: The underground alignment would not change the physical character of surrounding surface land uses. The aerial alignment would be visually congruent with surrounding industrial and commercial land uses. The at-grade alignment and facilities would comply with the Systemwide Station Design Standards and integrate with the existing character of the surrounding land uses.	No avoidance, minimization, or mitigation measures are needed.	No Adverse Effect

Resource	Topic	Impact Determination (Before Mitigation)	Rationale	Project Measures and/or Mitigation	Impact Determination (After Mitigation)
Community Cohesion	Access and Mobility	Adverse Effect	Long-term impacts related to access and mobility would be reduced through compliance with project measures and mitigation measures. The Build Alternative would not adversely affect access and mobility: ▪ At-grade Access: The underground alignment would not impact access and mobility on surface streets or at-grade resources such as the National Chicano Moratorium March site. The trench on 3rd Street, and aerial and at-grade alignments, including the tail tracks ending at Montebello Boulevard, would eliminate left-turns and crossings at unsignalized intersections. Per NPM TRA-1, best practice safety measures such as curbs, barriers, and signage crossings would be implemented. However, an adverse effect on access and mobility would still occur at the intersection of Garfield Avenue and Washington Boulevard because a reduction in travel lanes would result in an unacceptable level of service (see Section 3.15). Implementation of NMM TRA-1, which would install a new left turn lane and reconfigured right-turn lane at this intersection, would reduce adverse effects at the intersection of Garfield Avenue and Washington Boulevard to not adverse. Additionally, signalized crossings, new U-turns at Woods Avenue, and a new crosswalk at 3rd Street, as components of the Build Alternative, would provide for safe pedestrian and vehicle movements along the alignment. ▪ MSF Site 1: Through-access on Acco Street to Vail Avenue would be closed. A cul-de-sac would be provided to maintain access to businesses from Yates Avenue. NPM TRA-3 would maintain access to MSF Site 1 and surrounding properties and follow design requirements. There would be no adverse effect. ▪ MSF Site 2: The aerial support columns for the lead tracks would be placed so that access and mobility would be maintained along Yates Avenue. NPM TRA-3 would design proposed changes to traffic circulation according to applicable standards and criteria. There would be no adverse effect. ▪ MSF Site 3: This site would not require the closure of any primary vehicle routes critical to circulation. As identified in NPM TRA-3, proposed changes to traffic circulation around MSF Site 3 would be designed according to applicable standards and criteria. There would be no adverse effect. ▪ Benefits: The Build Alternative would improve transit access, reduce automobile reliance and congestion, increase bicycle and pedestrian access, and enhance mobility within and between communities overall.	NPM TRA-1, NPM TRA-3, NMM TRA-1	No Adverse Effect
Community Facilities and Public Services	Parks	No Adverse Effect	The Build Alternative would not adversely affect parks: ▪ No acquisitions or displacements: No physical acquisition, displacement, alteration, or relocation of parks.	No avoidance, minimization, or mitigation	No Adverse Effect

Resource	Topic	Impact Determination (Before Mitigation)	Rationale	Project Measures and/or Mitigation	Impact Determination (After Mitigation)
			▪ No increased demand for parks: No new housing would be constructed. ▪ Access: Vehicular, pedestrian, and bicycle access to parks would be maintained. Access to Parks of Interest would be improved and support Metro's goal to prioritize transit to parks investments.	measures are needed	
Community Facilities and Public Services	Multi-Use Trails	No Adverse Effect	The Build Alternative would not adversely affect multi-use trails: ▪ No acquisitions or displacements: No physical acquisition, displacement, alteration, or relocation of multi-use trails within the region.	No avoidance, minimization, or mitigation measures are needed	No Adverse Effect
Community Facilities and Public Services	Other Community Facilities	No Adverse Effect	The Build Alternative would not adversely affect other community facilities: ▪ No acquisitions or displacements: No physical acquisition, displacement, alteration, or relocation of fire, police, emergency service facilities, schools, or public facilities or local resources would occur. ▪ Compliance with safety regulations: Design and operation would comply with the Metro Rail Design Criteria's Rail Fire Life Safety Design Criteria, the National Fire Protection Association 130: Standard for Fixed Guideway Transit and Passenger Rail Systems (National Fire Protection Association 2023), and other safety regulations. ▪ Access: Access to fire, police, or emergency service facilities would remain available. ▪ Sheriff's Department Access: The proposed trench in 3rd Street for the underground guideway transition would eliminate left turns at La Verne Avenue near the Sheriff's Department. However, a new access road limited for use by Sheriff's Department vehicles would be constructed across 3rd Street, thus providing direct access to and from the Sheriff's Department for emergency access. ▪ 3rd Street Changes: Left turns would be eliminated at Civic Center Way. Woods Avenue would be modified to allow eastbound traffic on 3rd Street to make a U-turn to reverse direction. Westbound traffic would continue to be allowed to make a U-turn at Mednick Avenue to reverse direction. A new high-visibility crosswalk east of La Verne Avenue would provide pedestrian access across 3rd Street and maintain access to community facilities, such as the East Los Angeles Civic Center and Library. ▪ No population growth: The Build Alternative would not induce any population changes that would alter student populations at public schools or require physical alterations to schools as a result of an increased student population.	No avoidance, minimization, or mitigation measures are needed	No Adverse Effect

Source: Metro; CDM Smith/AECOM JV 2026.

Table 3.4-9 Long-Term Avoidance, Minimization, and Mitigation Measures

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
Neighborhood Continuity	Temporary construction sites may be used for long-term joint development or parking facilities	NPM EFI-1 (Metro Joint Development Program and Metro Pilot Local Hiring Initiative). Project measures to address fiscal and economic impacts include the following: ▪ Upon completion of construction, property needed for construction but not required to maintain the physical infrastructure or necessary for access shall be evaluated for inclusion in the Metro Joint Development Program for possible affordable housing development or other transit supportive land use, or included in a report to Metro Real Estate Asset Management for Surplus Land Act (SLA) requirements before sale. Any subsequent development shall be environmentally cleared separately from this Project and would undergo its own community input process. ▪ Project work shall comply with the Metro Pilot Local Hiring Initiative (effective May 21, 2021), which requires contractors working on Metro construction projects to comply with certain targeted hiring requirements, including prioritizing local workers from Los Angeles County.	Project Measure	No Adverse Effect – Operational best management practices for the Build Alternative would be implemented
Physical Character	Full and partial permanent acquisition of commercial and industrial properties would adhere to the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970; access to relocated resources would be maintained in the long term	No avoidance, minimization, or mitigation measures needed	None	No Adverse Effect
Access and Mobility	Elimination of left-turns and crossings at unsignalized intersections	NPM TRA-1 (Operational Best Management Practices for Transportation). Operational best management practices (BMP) for the Project shall include the following: ▪ Sidewalks shall not be altered to the extent that pedestrian circulation would be impaired or in violation of Americans with Disabilities Act (ADA) standards. ▪ Additional enhancements to the existing signalized crosswalks, such as marked crosswalks and lighting, shall further improve pedestrian circulation and non-motorized access to transit stations. ▪ Metro shall coordinate with local jurisdictions to enhance walkability in the immediate vicinity of the proposed station areas. ▪ Operation of the Project shall not conflict with any identified local programs, plans, or policies for circulation elements in coordination with local jurisdictions.	Project Measure	No Adverse Effect – Operational best management practices for the Build Alternative would be implemented

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
		▪ New traffic signals or modifications to existing traffic signals (e.g., signal phasing changes) to accommodate light rail movements, traffic circulation patterns at intersections, grade crossings, and to facilitate pedestrian access to/from stations (e.g., mid-block crossings at stations) shall be designed in accordance with the Metro Rail Design Criteria (MRDC) and standards. ▪ Bicycle circulation and access amenities shall be provided in the immediate station areas. Amenities may include bike parking and connections to existing nearby bike facilities within up to a 600-foot radius to improve bicycle-to-transit connections, and shall be determined during preliminary engineering. ▪ Proposed bicycle facilities that intersect the Project at applicable intersections shall remain accessible and allow bicyclists and pedestrians to cross at those intersections. ▪ Project operations shall not preclude vehicle or truck access along Washington Boulevard, and left-turn movements shall continue to be allowed to and from major cross-streets (e.g., Garfield Avenue, Greenwood Avenue) at signalized intersections. ▪ Stations and grade crossings shall be designed in accordance with the MRDC, including Fire/Life Safety Design Criteria, to ensure safety and minimize potential hazards at all locations. ▪ The Project shall be operated per applicable State, Metro, and city design criteria and standards, including adherence to design codes and standards such as the Occupational Safety and Health Administration (OSHA), California Division of Occupational Safety and Health Administration (Cal/OSHA), California Public Utilities Commission (CPUC), California Manual of Uniform Traffic Control Devices (MUTCD), Metro safety and security programs and standards (i.e., MRDC and Metro Systemwide Station Design Standards Policy), and building standards to ensure emergency vehicle access and response times are maintained and at acceptable levels. ▪ Best practice safety measures shall be implemented to minimize potential conflicts between vehicles and pedestrians. Measures may include mid-block crosswalks, signal-protected pedestrian movements, channelization, barriers high visibility curbs between the guideway and roadway to prohibit vehicles from driving onto the tracks, barriers to protect and route pedestrians, ADA-compliant curb ramps, and warning signs to provide for convenient and safe access to station platforms. ▪ Uncontrolled mid-block vehicular crossings of tracks and mid-block left-turns shall not be permitted and shall be physically prohibited by a curb between the roadway and at-grade guideway with a fence between the two tracks in the center of the guideway whenever feasible.		

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
		- Grade crossings shall include traffic signal coordination and upgrades in accordance with MRDC to avoid conflicts between light rail vehicles (LRV) traffic along Washington Boulevard. - Vehicular and pedestrian crossings across the at-grade segments of the alignment shall be limited to intersections controlled by traffic signals.		
Access and Mobility	Potential local roadway circulation effects during operation of the MSF	NPM TRA-3 (Operational Best Management Practices for the Maintenance and Storage Facility Regarding Transportation). Operational best management practices (BMP) for the maintenance and storage facility (MSF) include the following: Access shall be maintained to properties to the west of the vacated portion of Acco Street via Yates Avenue (for MSF Site 1). Access shall be maintained on Yates Avenue (for MSF Site 2). Access shall be maintained on Gayhart Street (for MSF Site 3). Any roadway changes shall be designed according to applicable Metro Rail Design Criteria (MRDC), state, and local design criteria and standards where applicable, including fire code and Fire/Life Safety Design Criteria and standards, and shall provide adequate emergency access	Project Measure	No Adverse Effect – Operational best management practices for the Build Alternative would be implemented for the MSF
Access and Mobility	Reduced travel lanes on Washington Boulevard would result in an unacceptable level of service	NMM TRA -1 (Garfield Avenue and Washington Boulevard Intersection). At the Garfield Avenue and Washington Boulevard (Intersection #32), restripe the southbound lane approach by converting one through lane into a second left-turn lane and reconfiguring the right-turn lane as a shared through/right-turn lane to optimize this intersection's cycle length and splits.	Mitigation Measure	No Adverse Effect – adverse effects from travel lane reduction on Washington Boulevard would be reduced
Parks	No acquisitions, displacement, or increased demand for parks	No avoidance, minimization, or mitigation measures needed	None	No Adverse Effect
Multi-Use Trails	No acquisitions or displacement of multi-use trails	No avoidance, minimization, or mitigation measures needed	None	No Adverse Effect
Other Community Facilities	No acquisitions or displacement of other community facilities	No avoidance, minimization, or mitigation measures needed	None	No Adverse Effect

Source: Metro; CDM Smith/AECOM JV 2026.

3.5 Historic, Archaeological and Tribal Resources

This section evaluates the potential long-term effects of the No Build Alternative and the Build Alternative on historic, archaeological, and tribal resources, as detailed **Appendix K** (Historic, Archaeological and Tribal Resources Technical Report). Short-term construction effects are discussed in **Section 3.17** (Construction). The assessment of reasonably foreseeable effects in this section is based upon the temporal proximity parameters detailed in **Chapter 3.0** (Introduction), and the geographic proximity parameters detailed in **Section 3.5.1** (Affected Environment).

3.5.1 Affected Environment

The Historic, Archaeological, and Tribal Resources Study Area is the Area of Potential Effects (APE) developed as part of the Section 106 consultation, as detailed in this section. The APE is described in the text box and a map is provided in **Appendix K, Attachment A**. The APE, which is influenced by the scale and nature of the project, consists of all proposed right-of-way and acquisition and construction areas, and all parcels adjacent to permanent site improvements and facilities, including an at-grade and grade-separated guideway alignment; stations and power substations; parking facility; railroad systems that support vehicle operations such as traction power substations and equipment shelters; and the MSF, including MSF Sites 1, 2, and 3.

This section uses the terminology “direct” and “indirect” effects, because this language is in the implementing regulations at 36 CFR Part 800.

- **Direct Effects** to historic properties evaluated in this section are those effects caused by the undertaking at the same time and place with no intervening cause and regardless of type (e.g., visual, physical, auditory), and may be permanent or temporary.
- **Indirect Effects** to historic properties evaluated in this section are those caused by the undertaking that are later in time or farther removed in distance but still reasonably foreseeable.

Historic, Archaeological, and Tribal Resources Study Area

- **APE:** Geographic area within which a project may directly or indirectly alter the character, setting and/or use of a historic property; this is determined by FTA in consultation with the State Historic Preservation Officer.
 - **APE Horizontal Extent:** Approximately 4.7 miles long
 - Encompasses parcels of land adjacent to the ground disturbance and potential construction staging areas.
 - **APE Vertical Extent:** Maximum depth of 44 to 60 feet below ground surface, and maximum height of 70 feet)
 - Depth to account for subsurface activities, and above ground surface to include above ground features including where aerial guideway would be constructed.

Regulations associated with historic, archaeological, and tribal resources applicable to the Project are summarized in **Appendix S** (Regulatory Setting Summary) and detailed in **Appendix K**. Data sources used in this analysis include record searches, databases available from federal, state, and local regulatory agencies, consulting party outreach, field surveys, and additional archival research including, available historic maps and images (e.g., Sanborn fire insurance maps, historic aerials, historic topographic quadrangles, plat maps, etc.), historic building permits, historic newspaper articles, and information derived from online research at various agencies, historical societies and other sources.

FTA and Metro have undertaken the consultation process under Section 106 of the NHPA, including consultation with the State Historic Preservation Office (SHPO), Native American tribes, local governments, and other interested parties. The consultation process undertaken by FTA for the Project is summarized in the following section with additional detail provided in **Appendix K**.

Historic Property is “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion on the National Register of Historic Places (NRHP)” (54 USC Section 300308).

Determination of Effect is the result of applying the criteria of adverse effect to assess the effects of the undertaking on historic properties within the APE. An adverse effect would be found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualifies the property for inclusion in the NRHP in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified after the original evaluation of the property’s eligibility for the NRHP.

- APE delineation: FTA and Metro provided Draft APE maps during initial outreach to tribal organizations, local governments and interested parties in January 2025. None of these groups commented on the proposed delineation of the APE. FTA requested comments from SHPO regarding the delineation of the APE on April 21, 2025. SHPO responded to FTA on May 15, 2025, that the APE delineation appears adequate. On June 20, 2025, SHPO concurred with the eligibility finding for the Vail Field Industrial Addition historic district, 2187 Garfield Avenue, and 2353 Garfield Avenue, as part of the Section 106 consultation for the proposed geotechnical boring studies for the Eastside Transit Corridor Phase 2 Project.
- Tribal consultation: Section 106 tribal consultation efforts were performed beginning in 2024 and are ongoing. Seventeen tribal contacts from nine tribal organizations were contacted by FTA on January 9, 2025, with follow-up emails sent on February 3, 2025, and follow-up calls on February 13, 2025. These tribes may have information regarding tribal cultural resources in the area of potential effects; six tribes communicated additional information and requests for continuing consultation with FTA. Section 106 Tribal consultation details can be found in **Appendix C** (Agency and Tribal Consultation and Coordination/Distribution List).
- Consultation with local governments: Section 106 local government consultation efforts were performed beginning in 2024 and are ongoing. Four local government agencies were contacted. The City of Commerce and the City of Montebello requested consulting party status, and Los Angeles County Department of Regional Planning provided a list of historic properties in the area of potential effects. A response was not received from the Los Angeles County Historic Landmarks and Records Commission.
- Consultation with Interested Parties: Section 106 interested party consultation efforts were performed beginning in 2024 and are ongoing. Ten interested parties were contacted. The Los Angeles Conservancy responded on December 26, 2024, expressed an interest in the Project, and requested consulting status. The Los Angeles Conservancy met with the FTA on July 25, 2025 to discuss the Build Alternative and the potential for effects to historic properties. The FTA received a follow-up letter from the Los Angeles Conservancy on August 21, 2025, providing additional comments and recommendations. Concerned that the National Chicano Moratorium March Route could be affected by the Build Alternative, the Los Angeles

Conservancy recommended an interpretive signage program be created for this resource. In a letter from the FTA to the Los Angeles Conservancy on November 19, 2025, these concerns and recommendations have been acknowledged by the agencies and are under consideration. The Los Angeles Conservancy will continue to be engaged with to identify potential opportunities to enhance public recognition of the National Chicano Moratorium March and its historical significance.

3.5.1.1 Architectural Resources

Based upon archival research and a field survey described in **Section 3.5.1**, ten historic properties were identified in the APE, including one NRHP listed Historic District, one NRHP listed building, two NRHP eligible historic districts, and six NRHP eligible buildings. These resources are listed in **Table 3.5-1**. Additional information on these resources, including a description and photographs, is presented in **Appendix K**. No known archaeological resources or properties of traditional religious and cultural importance to an Indian tribe were identified within the APE. However, as a result of tribal consultation, the APE exhibits sensitivity for buried and currently unknown traditional cultural places.

Table 3.5-1 Historic Properties in the Area of Potential Effects

Property	Address	Date	Jurisdiction	NRHP Eligibility
National Chicano Moratorium March (NRIS ID# 100002655)	3rd Street, Beverly Boulevard, Atlantic Avenue, Whittier Boulevard, and Salazar Park	1970	East Los Angeles (unincorporated Los Angeles County)	Listed in the NRHP
Griffith STEAM Magnet Middle School (DOE-19-94-0475-0000)	4765 4th Street	1939	East Los Angeles (unincorporated Los Angeles County)	Eligible for listing in the NRHP
Golden Gate Theater (NRIS IS# 82002192)	5176 Whittier Boulevard	1927	East Los Angeles (unincorporated Los Angeles County)	Listed in the NRHP
Vail Field Industrial Addition – historic district	Vail Field Industrial Addition – Commerce	1951–1960	City of Commerce	Eligible for listing in the NRHP
Pacific Metals Company building	2187 Garfield Avenue	1955–1952	City of Commerce	Eligible for listing in the NRHP
Goodyear Tire and Rubber Company Warehouse	2353 Garfield Avenue	1952	City of Commerce	Eligible for listing in the NRHP
E.F. Hauserman Company Building	6838 East Acco Street	1957	City of Commerce	Eligible for listing in the NRHP
Greenwood Elementary School (DOE-19-90-0060-0000)	900 Greenwood Avenue	1947	City of Montebello	Eligible for listing in the NRHP
South Montebello Irrigation District	864 Washington Boulevard	1941	City of Montebello	Eligible for listing in the NRHP
William and Florence Kelly House ("Kelly House") - Spanish Colonial Revival-style single-family residence	860 Washington Boulevard	1937	City of Montebello	Eligible for listing in the NRHP

Source: South Central Coastal Information Center 2024; CDM Smith/AECOM JV 2026.

Key: NRIS ID# = National Register Information System Identification Number

3.5.1.2 Archaeological Resources

A 2026 geotechnical investigation produced documentation of subsurface stratigraphy in the APE (Donatucci et al. 2026). One Hundred and eight boring samples were taken throughout the APE (refer to the approved boring location map in **Appendix U** [Boring Locations]). The results show a level of asphalt to approximately 8 inches in depth followed by a brown, fine grained, poorly graded sand to sandy silt down to a depth of 5-25 feet (Donatucci et al. 2026). The results of the soil boring are consistent with the native soils in the area, exhibiting a brown sand to sandy loam alluvial deposit. As the soils in the area are associated with alluvial sediments, there is a potential to contain intact archaeological resources.

3.5.1.3 Tribal Resources

Tribal cultural experts from the Gabrieleño Band of Mission Indians – Kizh Nation undertook tribal monitoring during the 2026 geotechnical investigation between August and October 2025. Tribal cultural experts provided Tribal Worker Environmental Awareness Program (WEAP) training to construction crews and management on August 5, 2025. No cultural resources were found.

3.5.2 No Build Alternative

The No Build Alternative, as described in **Section 2.2** (No Build Alternative) of the EA, would include already planned and funded roadway and transit projects but would not provide a rail transit option for communities in eastern Los Angeles County. Overall, as shown in **Table 3.5-2**, the No Build Alternative would result in no long-term adverse effect on cultural resources.

Table 3.5-2 Cultural Resources Impact Summary – No Build Alternative

Topic	Impact	Rationale
Historic properties	No Adverse Effect	- Planned and funded projects under the No Build Alternative would follow laws and regulations pertaining to historic properties, such as the NHPA, in addition to the environmental review process. - Any adverse effects on historic properties from planned and funded projects under the No Build Alternative would be resolved through adherence to and compliance with applicable existing laws and regulations

Source: Metro; CDM Smith/AECOM JV 2026.

3.5.3 Build Alternative

Reasonably foreseeable long-term effects of the Build Alternative on historic properties include visual, audible, or atmospheric intrusions, and the loss of contributing properties to the Vail Field Industrial Historic District.

3.5.3.1 Visual Effects on Architectural Historic Properties

The majority of the alignment would be located underground within a tunnel. In the areas where the Build Alternative alignment would be aboveground, the guideway would be generally located within the existing road right-of-way. The visual setting is characterized by a primarily built-out urban environment consisting of a variety of commercial, industrial, and residential developments, interspersed with local multi-lane streets with passenger vehicle and truck traffic and active railroad corridors. Because the aboveground setting already features modern traffic activities and infrastructure, none of the historic properties in the APE listed in **Table 3.5-2** above would have their integrity diminished the light rail transit or the MSF. The Build Alternative would blend with the existing traffic pattern along Washington Boulevard.

As described in **Section 3.8** (Visual Resources), the new aerial structure could introduce a new visual element as well as additional light and glare to the settings of some historic properties, such as the Vail Field Industrial Addition historic district. However, the aerial guideway would be at a similar height to the existing utility infrastructure and would not degrade the existing visual character or quality of public views. If MSF Site 1 is

selected, there would be no additional features that could indirectly affect historic properties. However, if MSF Site 2 is selected, a portion of the aerial guideway would be located within the parking lot of a historic property (the Pacific Metals Company building); however, the guideway would be at a relatively similar height to the existing utility infrastructure. The new aerial structure would introduce a new visual element but would not change the historic character of the building, nor alter the façade of the building or diminish the integrity of the building's significant design features. The alteration of the setting with the new visual element of the aerial structure would not materially impair its integrity and would thus result in no adverse effect.

If MSF Site 3 is selected, the MSF would introduce a new visual element to the Vail Field Industrial Addition historic district, but the aesthetics and operations of the site would be consistent with the industrial nature of the historic district. The MSF Site 3 buildings and facilities would be one- to two-story industrial buildings and include associated rail infrastructure, which would be congruent with the existing height and design of the surrounding buildings. Any landscape elements would complement the existing landscape features within the Vail Industrial Addition historic district. These features would be visually consistent with other railway infrastructure within the area, such as the Metrolink Orange County and Riverside Lines located approximately 0.75 mile south and north, respectively, of the Greenwood station. Operation of the Build Alternative would not diminish the integrity of the historic properties' character defining features. As a result, there would be no adverse effect on historic properties from visual changes during operations.

Construction of the Build Alternative would acquire and demolish six contributors to the Vail Field Industrial Addition historic district, which could result in a long-term effect on the historic district. However, none of these contributors are individually eligible historic properties. The six contributors are located near the center and on the periphery of the historic district, though their demolition would not alter the district's character defining features. The core would remain intact with enough contributors with characteristics to convey its historical significance. Therefore, the Build Alternative would have no long-term adverse effect on the Vail Field Industrial Addition historic district.

3.5.3.2 Noise and Vibration Effects on Built Environment Historic Properties

Build Alternative noise levels are not predicted to exceed the FTA "moderate impact" criteria at noise-sensitive historic properties along the alignment (Greenwood Elementary School and the Kelly House). Noise levels are provided in **Section 3.13** (Noise). Maximum vibration levels at historic properties along the Build Alternative are predicted to be 68 vibration decibels. See **Section 3.13.3.1** (Build Alternative, Operational Impacts). Due to the strategic location of switches, none of the vibration levels predicted at historic properties are predicted to exceed the FTA frequent impact criteria along the Build Alternative. Based on this assessment, the Build Alternative would not result in long-term adverse effects from vibrations on built environment historic properties.

3.5.3.3 Effects on Archaeological Resources

There are no previously recorded archaeological resources identified in the APE. The Build Alternative would not physically demolish, destroy, relocate, or alter any known archaeological resources that are historic properties. Although unknown, buried resources that may be eligible for inclusion in the NRHP may exist within the APE, operation of the Build Alternative would not require additional ground disturbance or other activities that could adversely affect archaeological historic properties. Therefore, the Build Alternative would have no long-term effect on known archaeological historic properties and no mitigation measures would be required.

The Build Alternative would have no operational effects on properties of traditional religious and cultural importance to an Indian tribe that could be a historic property. No precontact resources or other resources with tribal significance were identified within the APE as a result of the background research, field survey, or tribal consultation; however, the APE exhibits sensitivity for buried and currently unknown traditional cultural places. Although unknown, buried resources that may be eligible for inclusion in the NRHP may exist within the area of potential effects. However, operation of the Build Alternative would not require ground disturbance or other

activities that could adversely affect properties of traditional religious and cultural importance during operation. There would be no long-term adverse effect.

3.5.4 Avoidance, Minimization, and Mitigation Measures for the Build Alternative

The measures identified in **Table 3.5-3** would be implemented for the Build Alternative in the long term. Construction measures are provided in **Section 3.17**.

Table 3.5-3 Long-Term Avoidance, Minimization, and Mitigation Measures

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
Architectural Historic properties	Operation of the Build Alternative would not result in adverse effects on historic properties from visual changes and on architectural historic properties from noise and vibration.	No avoidance, minimization, or mitigation measures needed	None	No Adverse Effect
Archaeological Resources	Operation of the Build Alternative would not require ground disturbance or other activities that could adversely affect properties of traditional religious and cultural importance in the long term.	No avoidance, minimization, or mitigation measures needed	None	No Adverse Effect

Source: Metro; CDM Smith/AECOM JV 2026.

3.6 Economic Impacts

This section evaluates the potential long-term effects of the No Build Alternative and the Build Alternative on economics, as detailed in **Appendix I** (Economic Impacts Report). Short-term construction effects are discussed in **Section 3.17** (Construction).

The assessment of reasonably foreseeable effects in this section is based upon the temporal proximity parameters detailed in **Chapter 3.0** (Introduction), and the geographic proximity parameters detailed in **Section 3.6.1** (Affected Environment).

3.6.1 Affected Environment

Economics Study Area

- **Corridor Jurisdictions:** Cities of Commerce and Montebello and Los Angeles County¹¹ considered in the larger regional context of the Los Angeles-Long Beach-Santa Ana Metropolitan Statistical Area (Los Angeles and Orange Counties) and the Southern California Association of Governments 6-County Area
 - Captures the benefits and impacts of new transportation infrastructure
 - Identifies economic effects for the County of Los Angeles and the Los Angeles-Long Beach-Santa Ana Metropolitan Statistical Area
 - Identifies fiscal effects for the corridor jurisdictions

Regulations associated with economic analysis for the Project are summarized in **Appendix S** (Regulatory Setting Summary) and detailed in **Appendix I**. A review of databases from federal, state, and local regulatory agencies was conducted for this evaluation. For additional information on the regulatory setting, see **Appendix I**.

3.6.1.1 Methodology

The Build Alternative would generate new jobs and associated earnings in the long-term. The potential economic effects of the Build Alternative when compared to the No Build Alternative are discussed quantitatively in **Section 3.6.3**. For the Build Alternative's mobility and connectivity effects, the analysis applies United States Department of Transportation guidance to calculate time value savings resulting from enhanced transit services. The amount of time saved due to the Build Alternative was estimated using Metro's travel demand model (refer to **Appendix O** [Transportation and Traffic Impacts Report]).

The construction analysis summarized in **Section 3.17** estimates the short-term economic effects resulting from construction jobs and earnings generated by each alternative based on the respective construction cost estimates. The short-term economic effects associated with construction expenditures were measured using the Regional Input-Output Modeling System II multipliers from the United States Department of Commerce Bureau of Economic Analysis. The number of jobs generated by the Build Alternative was then considered within the context of Metro's Pilot Local Hire Initiative (including the Project Labor Agreement and Construction Careers Policy) for consistency with Metro's construction employment policies. Potential construction-related effects on local businesses were assessed via a review of **Appendix H** (Community Impacts Assessment), **Appendix M** (Real Estate and Acquisition Impacts Report), **Appendix L** (Noise and Vibration Impacts Report), **Section 3.11** (Land Use and Development) of the EA, and **Appendix O**. The annual tax revenue associated with the loss of properties due to right-of-way purchase, displacement, and relocation was determined by first identifying the actual properties required for the Build Alternative as identified in the **Appendix M**. The short-term economic

¹¹ Los Angeles County encompasses the entire county area, including approximately 101 unincorporated areas, one of which is East Los Angeles.

effects of construction would be considered adverse if they would result in less spending, funding or a reduction in community services due to loss of local tax revenue.

For a full discussion of the methodologies used to calculate economic effects, refer to **Appendix I**.

3.6.1.2 Existing Conditions

The Economics Study Area is within the Los Angeles-Long Beach-Santa Ana Metropolitan Statistical Area, which is one of the nation's largest and most diverse urban economies, serving as an international gateway to global commerce. However, without meaningful investment in transportation infrastructure to handle future growth, the existing comparative economic advantages would be eroded by rising travel times, congestion costs, increased emissions, and reduced travel reliability.

Table 3.6-1 summarizes employment and population trends for the areas that comprise the Economics Study Area, with the Southern California Association of Governments 6-County Area provided for comparison.

Table 3.6-2 summarizes unemployment trends for the areas that comprise the Economics Study Area, with the total for the United States provided for comparison. As **Table 3.6-3** shows, the unemployment rate increased in 2020 as a result of the Coronavirus disease 2019 (COVID-19) pandemic, but then decreased across all geographies to pre-pandemic levels by 2022. Also, unemployment rates are generally similar across jurisdictions in the Economics Study Area, but higher compared to the United States as whole.

Table 3.6-1 Employment and Population Forecasts

Jurisdiction	Employment 2025	Employment 2050	Percent Change (2025-2050)	Population 2025	Population 2050	Percent Change (2025-2050)
Commerce	62,079	63,442	2.2%	17,395	17,494	0.6%
Montebello	36,133	37,344	3.4%	69,710	71,925	3.2%
Los Angeles County	5,097,096	5,462,054	7.2%	10,057,369	10,799,700	7.4%
Southern California Association of Governments 6-County Area	9,221,080	10,276,319	11.4%	19,078,667	20,908,782	9.6%

Source: CDM Smith/AECOM JV 2026, **Appendix I**.

Key: % = percent; **bold text** = highest percentage

Table 3.6-2 Unemployment Rates for the Economics Study Area and Nationally

Economics Study Area	2018	2019	2020	2021	2022	2023
Commerce	5.6%	4.5%	10.7%	9.5%	5.3%	5.4%
Montebello	5.0%	4.9%	13.2%	9.7%	5.0%	5.0%
Los Angeles County	4.6%	4.5%	12.3%	8.9%	4.9%	5.0%
United States Total	3.9%	3.7%	8.0%	5.4%	3.6%	3.6%

Source: CDM Smith/AECOM JV 2026, **Appendix I**.

Key: % = percent; **bold text** = highest percentage

Table 3.6-3 summarizes housing and transportation costs for the jurisdictions that comprise the Economics Study Area. The data is sourced from the Center for Neighborhood Technologies' Housing and Transportation Affordability Index. The Center for Neighborhood Technologies defines affordability for combined housing and transportation costs as spending no more than 45 percent of household income. As the fourth column of **Table 3.6-3** indicates, every jurisdiction along the alignment exceeds this threshold. Commerce and Montebello both have higher than average transportation costs as demonstrated by the values exceeding 1.0 in the second to last column of the table. The table also shows that the average transportation costs in Montebello are currently offset to some degree by inexpensive housing, as indicated by the value of less than 1 in the fifth column.

Table 3.6-3 Housing and Transportation Costs for Economics Study Area Jurisdictions

Jurisdiction	Housing Cost as Share of Income (Percent)	Transportation Cost as Share of Income (Percent)	Housing and Transportation Cost as Share of Income (Percent)	Area Housing Cost Relative to County Average	Area Transportation Cost Relative to County Average	Area Housing + Transportation Cost Relative to County Average
Commerce	35	25	60	1.06	1.32	1.15
Montebello	32	28	60	0.97	1.47	1.15
Los Angeles County	33	19	52	1.00	1.00	1.00

Source: CDM Smith/AECOM JV 2026, *Appendix I*.

3.6.2 No Build Alternative

The No Build Alternative, as described in **Section 2.2** of the EA, would include already planned and funded roadway and transit projects but would not provide a rail transit option for communities in eastern Los Angeles County. The No Build Alternative would not result in economic or fiscal effects in addition to those attributed to already planned and funded projects.

Overall, as shown in **Table 3.6-4**, the No Build Alternative would not result in long-term economic effects, and would result in no adverse effect on economics.

Table 3.6-4 Economic and Fiscal Impact Summary – No Build Alternative

Topic	Impact	Rationale
Operation and Maintenance Expenditures	No Adverse Effect	▪ Would not generate additional light rail transit operation or maintenance expenditure.
Mobility	No Adverse Effect	▪ Would not improve mobility or result in mobility benefits (e.g., no travel time or cost savings) within the Economics Study Area.
Change to Tax Base	No Adverse Effect	▪ No additional light rail transit property acquisitions would be required.
Planned and Funded Transit	No Adverse Effect	▪ Includes existing and already planned transit projects, but not the addition of the LRT in the Economics Study Area.

Source: Metro; CDM Smith/AECOM JV 2026.

3.6.3 Build Alternative

Table 3.6-5 summarizes the reasonably foreseeable economic effects of the Build Alternative, organized as follows: (1) changes in taxation; (2) potential displacement of businesses and individuals; (3) disruptions to business activities; and (4) construction costs and associated economic impacts within the Economics Study Area.

Table 3.6-5 Summary of Economic Effects of the Build Alternative

Economic Effect
Changes in Taxation. Property acquisitions for the Build Alternative would remove an assessed property value of approximately \$81.85 million from the tax base across the three jurisdictions. This would result in an estimated total annual tax revenue loss of \$10,976,773 (\$10,239,139 in the City of Montebello, \$438,321 in the City of Commerce, and \$299,313 in Los Angeles County). In each jurisdiction, these losses represent less than 1 percent of the total assessed property value and are not expected to measurably affect public services or fiscal stability (see Appendix I). Over the long term, transit oriented development near proposed stations and the return of surplus properties to the tax base through joint development could partially or fully offset these losses.
Displacement of Businesses and Individuals. Appendix M estimates that property acquisitions associated with the Build Alternative would displace or relocate approximately 637 employees. While permanent job loss is possible, multiple available sites within the Economics Study Area, which includes potential transit oriented development locations, could accommodate displaced businesses. Rail transit investment has historically catalyzed economic development in comparable communities, which suggests that net employment effect may ultimately be positive. At the same time, displaced businesses and individuals would be entitled to relocation assistance consistent with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 and the California Relocation Assistance Act. See Appendix M for parcel-level details and information about Build Alternative effects related to acquisition and displacement.
Disruptions to Business Activities. Construction of the Build Alternative is anticipated to last approximately 60 to 84 months and could cause temporary adverse effects on businesses near or adjacent to construction areas. Potential disruptions include; traffic delays, increased noise and vibration, reduced access and visibility, and utility interruptions. Retail and personal services businesses are most susceptible to short-term revenue impacts, while industrial businesses may face increased transportation costs due to detours. Although some individual businesses may experience temporary negative effects, these represent a small share of the economy and would be temporary in nature. Project-level measures such as outreach, signage, and access management would help minimize disruption. See Section 3.17 for further discussion of construction effects. See Appendices H, L, M, and O for additional analysis.
Construction Costs and Economic Impacts. The Build Alternative has an estimated total capital cost of \$5.889 billion (2022 dollars). Excluding Measure M funding (\$3 billion) and line items with limited local economic impact (vehicle procurement and land acquisition), approximately \$1.894 billion in construction and professional services expenditures would generate measurable regional economic activity in the Economics Study Area. Applying Bureau of Economic Analysis RIMS II multipliers, these expenditures are estimated to support approximately 11,679 person-year jobs and \$895.7 million in earnings in Los Angeles County during the construction period of 2029 to 2034. Under Metro’s Pilot Local Hire Initiative, hiring priority would be given to residents of zip codes within five miles of the Project (see Appendix I).

Source: Metro; CDM Smith/AECOM JV 2026.

Table 3.6-6 summarizes the operation and maintenance costs for the Build Alternative. The unit costs were developed based upon the previous report “Eastside Transit Corridor Phase 2 – Operating and Maintenance Cost Estimate Technical Memorandum” from 2011. In that report, unit costs were presented in Fiscal Year 2010 dollars. The same unit costs have been escalated to Fiscal Year 2022 dollars (\$) using a 3.5 percent inflation rate. Total wages and benefits are estimated to be 44 to 48 percent of total operating expenses. Wages and benefits from operation of the Build Alternative would range between \$19.78 and \$21.58 million annually in 2022 dollars.

Table 3.6-6 Annual Operation and Maintenance Costs

—	Route Miles	Yards	Annual Platform Train Hours	Annual Platform Vehicle Miles	Number of Light Rail Vehicles in Peak Service
Units	4.57	1	17,710	1,732,167	9
Units Costs in 2022 dollars	\$257,475	\$12,269,943	\$237	\$14	\$423,122
Costs by Variable in 2022 dollars	\$1,176,662	\$12,269,943	\$4,190,022	\$23,509,699	\$3,808,099
Total Annual Costs in 2022 dollars	\$44,954,426				

Source: CDM Smith/AECOM JV 2026, **Appendix I**.

Key: \$ = dollars

Benefits would be greater for the jurisdictions served by the Build Alternative relative to the County as a whole as there would be less “leakage” (i.e., the amount of spending that takes place outside the reference economy) associated with project spending. The overall beneficial effect of the additional operation and maintenance jobs on the economy would depend on the source of funding for the workers. Funding from federal sources would generate greater effects than local funding sources as the federal funding would represent “new” money circulating into the economy. Therefore, the Build Alternative would result in a long-term beneficial economic effect.

In 2022, Metro received assistance from the federal government in the form of grants to fund 37.5 percent of total operations (Metro 2022b). However, some of this federal funding, such as the Congestion Mitigation and Air Quality Improvement formula funds, would be spent in the region regardless of the Build Alternative. It is assumed 10 percent of total operations would be project-specific, competitive funds from federal funding that are new to the Economics Study Area due to the Project; thus, the additional jobs created through operational activities would have a net benefit on economic activity, and would result in a long-term beneficial economic effect.

To estimate the beneficial effects associated with the Build Alternative, Regional Input-Output Modeling System II final demand multipliers were applied to the amount of new funding (10 percent) that would be used for operating expenses as shown in **Table 3.6-7**.

Table 3.6-7 Annual Operation and Maintenance Earnings and Employment Effects

Inputs	Los Angeles County	Los Angeles Metropolitan Statistical Area
Operating Expenditures (2022 dollars)	\$44,954,426	\$44,954,426
Percent of New Money ¹	10%	10%
Additional Operating Expenditure within Region funded by New Federal Money	\$4,495,443	\$4,495,443
Transit and Ground Passenger Transportation Final Demand Earnings Multiplier	0.4197	0.4777
Transit and Ground Passenger Transportation Final Demand Employment Multiplier	15.9026	17.6794
Earnings (in Thousands of 2022 Dollars)	\$1,887	\$2,147
Total Employment (Jobs per \$1 Million Spent) ²	71	79

Source: CDM Smith/AECOM JV 2026, **Appendix I**.

Notes:

¹ Percent of new money is the percent of total Operation and Maintenance expenses funded through federal funding sources that otherwise would not have been introduced into the regional economy.

² Components may not sum to totals due to rounding.

Key: \$ = dollars; % = percent

Reasonably foreseeable effects include employment and income resulting from operation of the Build Alternative. Additional effects would include employment resulting from the purchase of goods and services by Metro employees, and employment resulting from Metro workers spending their income within the Economics Study Area. It is estimated that long-term operation-related spending would generate \$2.2 million in additional wages and salaries for households and create 79 person-year jobs for all industries per year.¹² Based on the predicted economic benefits from the Build Alternative, the potential long-term effects would be beneficial, and would result in a beneficial economic effect.

When the Build Alternative becomes fully operational, it would improve mobility within the Economics Study Area relative to the No Build Alternative. The value of time saved, and the travel cost savings associated with diverting travelers from autos to transit for 2050 are shown in **Table 3.6-8** and **Table 3.6-9**. Therefore, the Build Alternative would result in a beneficial economic effect relative to time and cost savings.

Table 3.6-8 Project Annual Value of Travel Time Savings in 2050

Type of Travel	Share of Trips (percent)	Annual Time Savings (hours) ¹	Hourly Value of Travel Time Savings (2022 dollars) ²	Annual Value of Time Saved (2022 dollars) ³
Personal Travel	88.2	1,538,384.4	\$19.40	\$29,844,657
Business Travel	11.8	205,815.6	\$33.50	\$6,894,822
Total	100	1,744,200	—	\$36,739,480

Source: CDM Smith/AECOM JV 2026, **Appendix I**.

Notes:

¹ 2050 travel time savings from Travel Demand Model with FTA standard 95 percent ramp-up factor.

² Personal/Business split: 88.2 percent Personal, 11.8 percent Business (Table A-2).

³ All monetary values in 2023 dollars per May 2025 United States Department of Transportation Benefit-Cost Analysis Guidance.

Key: — = Not Applicable

Table 3.6-9 Project Annual Travel Cost Savings in 2050

New Weekday Riders ¹	Vehicle Miles Traveled (VMT) Savings (Average weekday) ¹	Auto Operating Cost per Mile (Dollar per Mile) ²	Auto Travel Cost Savings (2022 Dollars) ³
1,598,850	73,910	\$0.56	\$10,554,348

Source: CDM Smith/AECOM JV 2026, **Appendix I**.

Notes:

¹ 2050 Vehicle Miles Travelled (VMT) savings from Travel Demand Model with FTA standard 95 percent ramp-up factor.

² Auto Operating Cost of \$0.56 per mile for Light Duty Vehicles (2023 dollars).

³ Auto Travel Cost Savings = VMT Savings × Annualization Factor (255) × Operating Cost.

¹² A person-year job is defined as one job for one person for one year.

Long-term development effects of the Build Alternative include new development and/or redevelopment surrounding some of the proposed stations, which could potentially increase property tax revenues for the affected local jurisdictions within the Economics Study Area. Development of Metro-owned properties would be required to adhere to the Metro's Joint Development and Transit Oriented Communities Policy as set forth in NEPA Project Measure (NPM) EFI-1 (Metro Joint Development Program and Metro Pilot Local Hiring Initiative). By prioritizing joint development of surplus property and requiring local and apprentice hiring, adherence to these policies would minimize the effects of business acquisition and displacement, such as the loss of tax revenue, adverse displacement-related economic effects, and leakage of project-generated employment benefits outside the Economics Study Area. Metro would ensure joint development projects would be evaluated for possible housing development or other transit supportive land use, and align with housing and economic goals through standards planning reviews. Therefore, the Build Alternative would result in a long-term beneficial economic effect.

Construction activities would result in 123 acquisitions with tax implications (non-taxable properties are excluded from the analysis), which would potentially remove properties from the tax base and thereby reduce the tax revenue generated in the three jurisdictions where the acquisitions would occur—the Cities of Commerce and Montebello and Los Angeles County. The total assessed value of acquisitions would be \$81,853,100 million (in 2022 dollars) for fiscal year 2022 to 2023, resulting in a tax loss of \$10,976,773 annually across all jurisdictions, including \$438,321 in the City of Commerce, \$299,313 in Los Angeles County, and \$10,239,139 in the City of Montebello annually. The total value of all assessed property being acquired is \$41.14 million in the City of Commerce, \$30.51 million in Los Angeles County, and \$10.20 million in the City of Montebello. The total value of acquisitions in each jurisdiction is less than one percent in all jurisdictions. Properties that may be repurposed for joint development following construction would reduce negative effects on the tax base. Approximately 652 jobs would be potentially displaced or relocated; however, it also indicates that there would be no net loss of jobs overall (refer to **Appendix M** for additional details). Therefore, changes in the local tax base as a result of the Build Alternative would result in no long-term adverse effect.

3.6.4 Avoidance, Minimization, and Mitigation Measures for the Build Alternative

The measures identified in Table **3.6-10** would be implemented for operation of the Build Alternative. Construction measures are provided in **Section 3.17**.

Table 3.6-10 Long-term Avoidance, Minimization, and Mitigation Measures

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
Operations and Maintenance Expenditures	Build Alternative-related spending would generate additional wages and salaries for households and create jobs for the region.	No avoidance, minimization, or mitigation measures needed	None	Beneficial Effect
Operations and Maintenance Funding Sources	Funding sources for the Build Alternative would flow new money into the regional economy.	No avoidance, minimization, or mitigation measures needed	None	Beneficial Effect
Operations and Maintenance Expenditure Effects on the Regional Economy	Operation of the Build Alternative would generate new economic activity and create 79 person-year jobs.	No avoidance, minimization, or mitigation measures needed	None	Beneficial Effect
Mobility (Travel Time and Cost Savings)	Operation of the Build Alternative would improve mobility within the Economics Study Area relative to the No Build Alternative	No avoidance, minimization, or mitigation measures needed	None	Beneficial Effect

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
Long-term Development	Potential for new development and/or redevelopment around proposed stations	NPM EFI-1 (Metro Joint Development Program and Metro Pilot Local Hiring Initiative). Project measures to address fiscal and economic impacts include the following: ▪ Upon completion of construction, property needed for construction but not required to maintain the physical infrastructure or necessary for access shall be evaluated for inclusion in the Metro Joint Development Program for possible affordable housing development or other transit supportive land use, or included in a report to Metro Real Estate Asset Management for Surplus Land Act (SLA) requirements before sale. Any subsequent development shall be environmentally cleared separately from this Project and would undergo its own community input process. ▪ Project work shall comply with the Metro Pilot Local Hiring Initiative (effective May 21, 2021), which requires contractors working on Metro construction projects to comply with certain targeted hiring requirements, including prioritizing local workers from Los Angeles County.	Project Measure	Beneficial Effect – compliance with Metro Joint Development Program and Metro Pilot Local Hiring Initiative
Local Tax Base Changes	The Build Alternative would result in property acquisitions within the Economics Study Area	No avoidance, minimization, or mitigation measures needed	None	No Adverse Effect

Source: CDM Smith/AECOM JV 2026, **Appendix I**.

3.7 Geology, Soils, Seismic and Paleontological Resources

This section evaluates the potential long-term effects of the No Build Alternative and the Build Alternative on geology, soils, seismic and paleontological resources. Short-term construction effects are discussed in **Section 3.17** (Construction).

The assessment of reasonably foreseeable effects in this section is based upon the temporal and geographic proximity parameters detailed in **Chapter 3.0** (Introduction).

3.7.1 Affected Environment

The Study Area is the 0.5-mile to 2-mile radius from the guideway centerline described in **Section 3.1.1** (Study Area) to focus on the area where impacts are most likely to occur, such as changes in soil stability and localized seismic risk. This is considered within the larger context of the geological conditions within the region. Regulations associated with geology, soils, seismic, and paleontological resources applicable to the Project are summarized in **Appendix S** (Regulatory Setting Summary).

To determine potential effects on geology, soils, and paleontological resources, existing information on geotechnical, subsurface, and seismic conditions, and paleontological resources within the Study Area and greater region was assessed. A review of previous geotechnical investigations of the Study Area and region, geologic and topographic maps, and general plans were conducted to determine the presence of seismic and other geological hazards. A geotechnical investigation boring program conducted in the Study Area by Metro in 2025 supports the information summarized below. This geotechnical investigation included 108 borings taken along the alignment and MSF Sites 1 and 2, from La Verne Avenue to just east of Montebello Boulevard (refer to the approved boring location map in **Appendix U** ([Boring Locations])). The borings were conducted to inform the advancement of the engineering for temporary and permanent Build Alternative components, such as the at-grade track, aerial structure, MSF, and the underground stations. A review of paleontological potential by geologic unit within the Study Area, a paleontological literature search, and a record search by the Natural History Museum of Los Angeles County were conducted to determine the potential presence of paleontological resources within the Study Area.

3.7.1.1 Geology, Soils, and Seismic Conditions

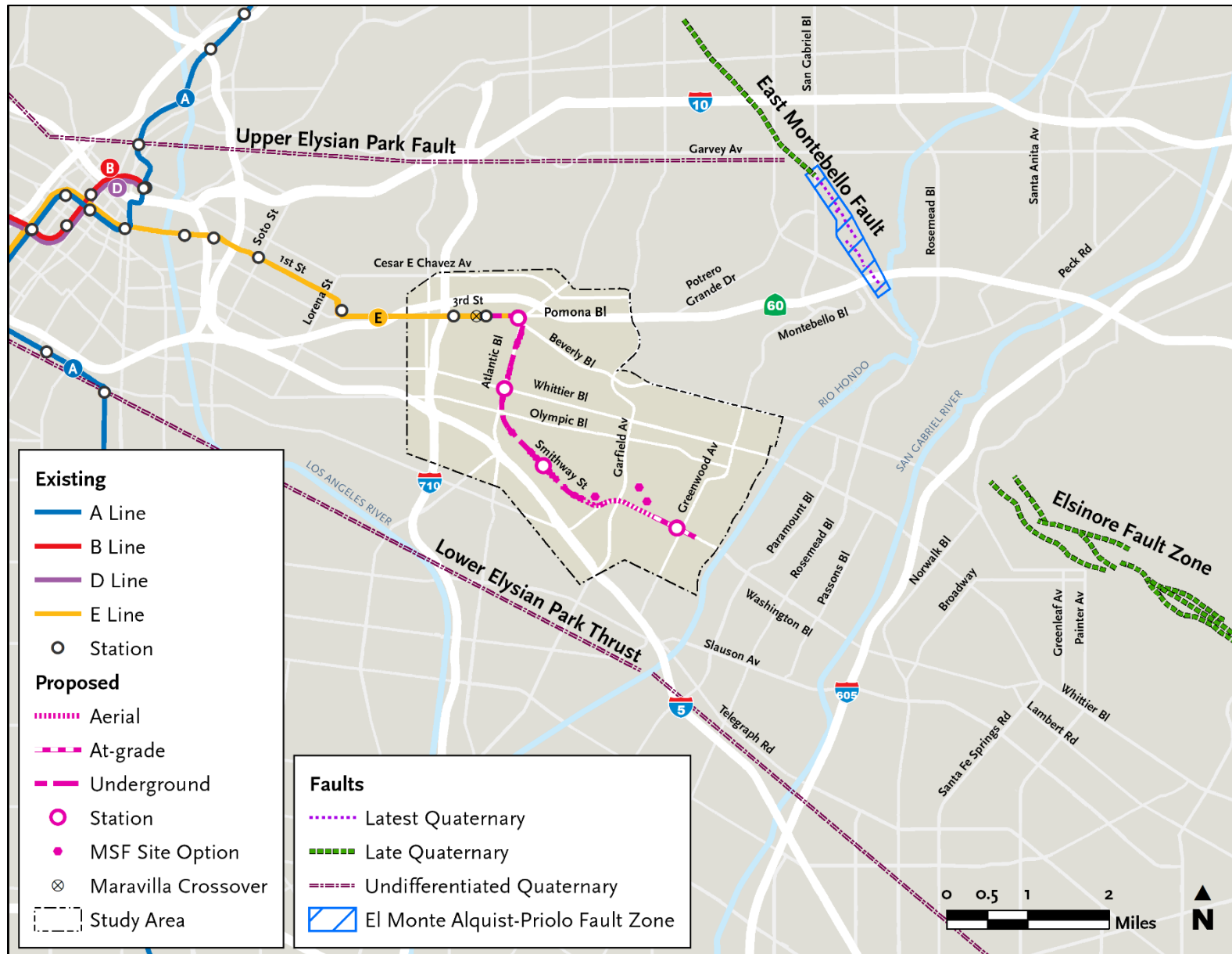
The region lies within the Peninsular Ranges geomorphic province, which is characterized by northwest-trending mountain ranges and hills separated by sub-parallel, sediment-filled valleys (California Geological Survey 2002). The subsurface soils along the Build Alternative alignment mainly consist of fill material underlain by natural Alluvial soils, and bedrock is unlikely to be encountered along the Build Alternative alignment (Diaz-Yourman and Associates 2021). Historic high groundwater levels in alluvium within the Study Area ranged from 120 to 150 feet below ground surface on the northwest at Atlantic Boulevard and 5 to 15 feet below ground surface at the Rio Hondo and San Gabriel River (Diaz-Yourman and Associates 2021). Based on a limited number of corrosion tests performed from samples collected from the limited field exploration, the on-site soils at the site-specific boring locations do not pose a corrosive environment (Diaz-Yourman and Associates 2021). The results of the geotechnical investigation conducted in 2025 show a level of asphalt to approximately 8 inches in depth followed by a brown, fine grained, poorly graded sand to sandy silt down to a depth of 5 to 25 feet. The results of the soil borings are consistent with the native soils in the area, exhibiting a brown sand to sandy loam alluvial deposit. Groundwater was encountered in three borings ranging from 120 to 125 feet in depth.

The Study Area is located in a seismically active, urbanized area that is primarily impervious with no exposed soils. As shown in **Figure 3.7-1**, there are no Alquist-Priolo Earthquake Fault Zones within the Study Area; the nearest is the East Montebello Fault approximately 4 miles northeast of the Build Alternative. Other seismic hazards include Holocene active faults such as the Whittier Fault, located approximately 4 miles to the east (Diaz-Yourman and Associates 2021), potentially active faults such as the MacArthur Park Fault approximately 5 miles northwest (Dolan and Sieh 1992), and blind thrust faults such as the Puente Hills and Elysian Park thrusts (Diaz-Yourman and Associates 2021).

As shown in **Figure 3.7-2**, the Study Area is not within a liquefaction zone or a landslide zone (California Geological Survey 2025). Although MSF Sites 1 and 2 are shown to be within a landslide zone, this area was a landfill disposal pit that was filled to street level in the 1980s and developed. Thus, the site is no longer in a landslide zone. See **Appendix J** for historical information on the closed landfill. The older alluvial deposits, which underlie the Study Area, are generally medium dense to dense (California Geological Survey 2012). Expansive soils, which are clay-rich soils that swell and shrink with wetting and drying may exist locally within alluvial soils present along the Build Alternative alignment as shown in **Figure 3.7-3**. The shrink-swell capacity of expansive soils can result in damage to pavements and foundations.

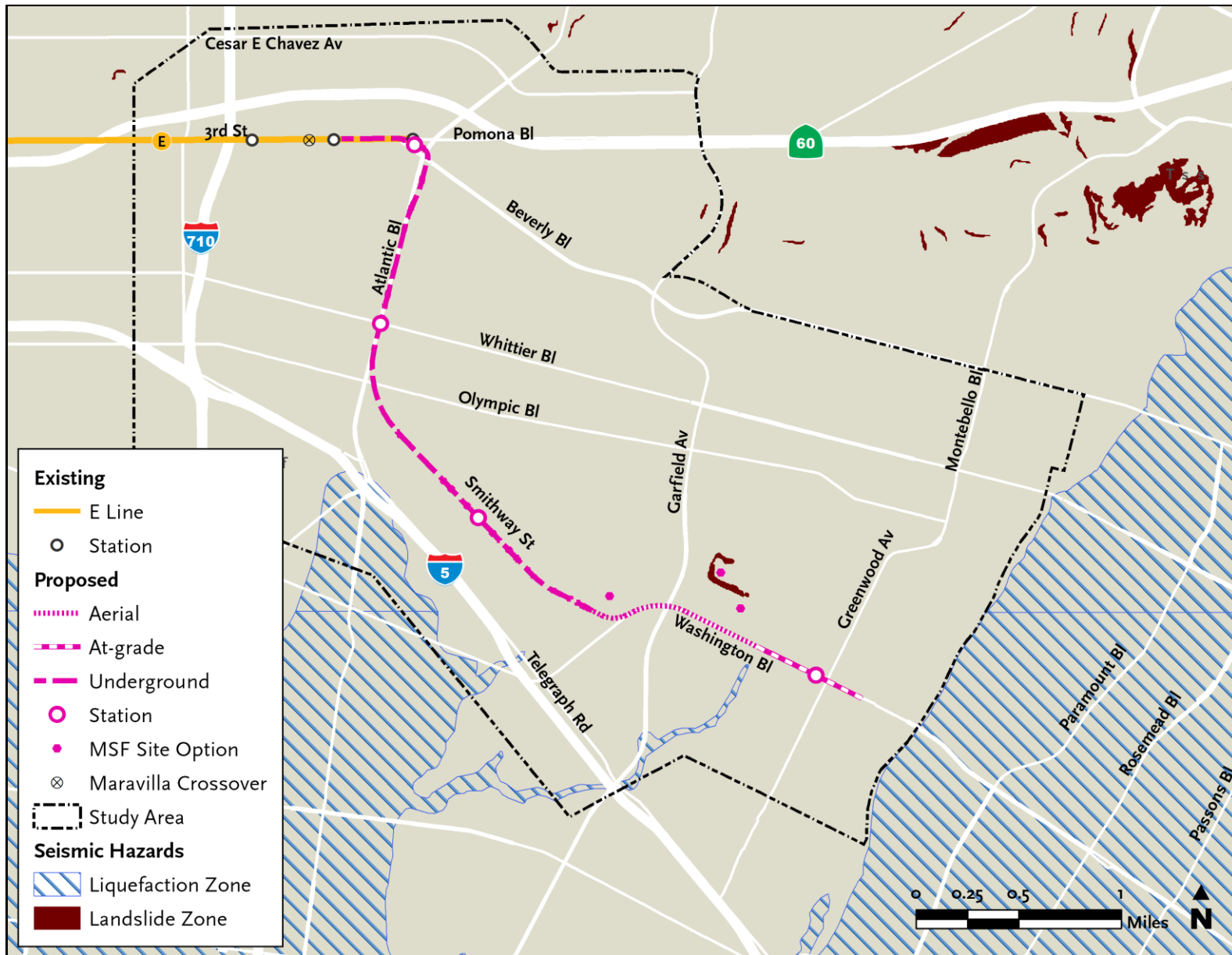
3.7.1.2 Paleontological Resources

The soils that are present in the Study Area include old alluvial fan sediments (late to middle Pleistocene). According to the fossil locality searches conducted by the Natural History Museum of Los Angeles County in 2019, one fossil locality was identified near north of Floral Drive between the Long Beach Freeway (Interstate 710) and Monterey Park Road (northwest of the Study Area) and a second locality was identified near the intersection of Atlantic Avenue and Interstate 710 (southwest of the Study Area) at a depth of 20 to 35 feet that produced mastodon, horse, deer, sabretooth cat, and turkey fossils (McLeod 2019). Another locality, located north of Leffingwell Road and east of La Mirada Boulevard (southeast of the Study Area), identified horse fossils at only 2 feet below ground surface (McLeod 2019). The findings suggest that soils in the Study Area are associated with old alluvial fan sediments and could be categorized as having high potential for paleontological resources. In addition, a review of published and unpublished literature of known paleontological resources was conducted to determine if there is a presence of paleontological resources. The literature search yielded no records of fossil localities near the Build Alternative.



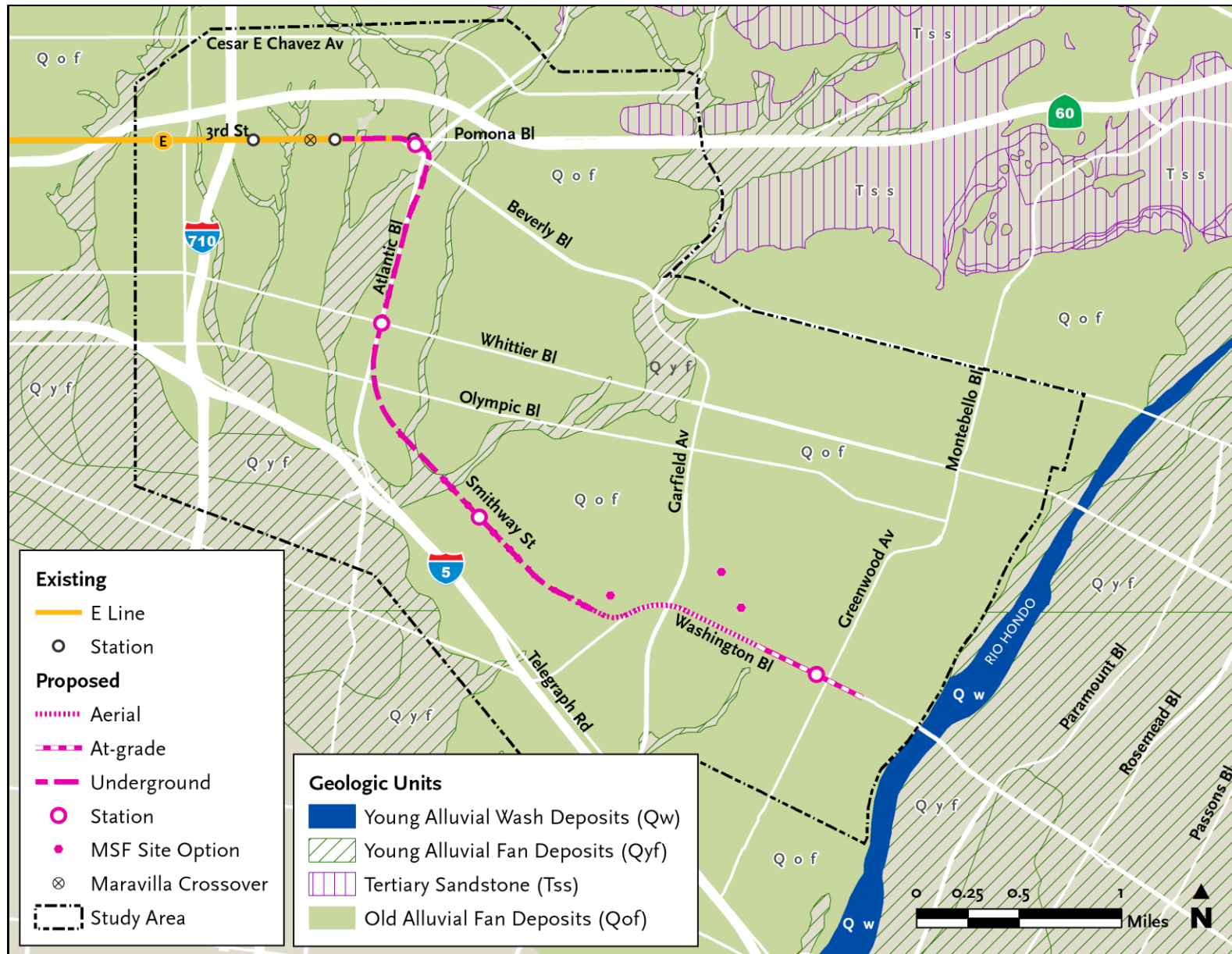
Source: Metro; CDM Smith/AECOM JV 2026.

Figure 3.7-1 Alquist-Priolo Earthquake Fault Zone Northeast of the Region



Source: Metro; CDM Smith/AECOM JV 2026.

Figure 3.7-2 Liquefaction and Landslide Hazard Zone Map



Source: Metro; CDM Smith/AECOM JV 2026.

Figure 3.7-3 Regional Geology Map

3.7.2 No Build Alternative

The No Build Alternative, as described in **Section 2.2** (No Build Alternative) of the EA, would include already planned and funded roadway and transit projects but would not provide a rail transit option for communities in eastern Los Angeles County. Overall, as shown in **Table 3.7-1**, the No Build Alternative would result in no long-term adverse effect on geology, soils, seismic, and paleontology resources.

Table 3.7-1 Geology, Soils, Seismic, and Paleontological Resources Impact Summary – No Build Alternative

Topic	Impact	Rationale
Seismic Hazards, Soil Erosion, Flood risk, Soil Stability, Expansive Soils, and Paleontological Resources	No Adverse Effect	- The Study Area is located within a seismically active, and highly urbanized region. - Already planned transit and roadway projects would comply with applicable standards and design requirements relative to seismic safety, soil erosion, flood risk, soil stability, expansive soils, and paleontological resources.

Source: Metro; CDM Smith/AECOM JV 2026.

3.7.3 Build Alternative

The Build Alternative would not exacerbate the potential for geological and seismic related hazards. As discussed in **Section 3.7.1**, the Study Area is located within a seismically active region. To address potential seismic hazards, the Build Alternative would be constructed in compliance with the Metro Rail Design Criteria, applicable building codes, and standards as identified in NEPA Project Measure (NPM) GEO-1. Compliance with the latest earthquake-resistant building design standards would substantially reduce potential structural damage and the risk to public safety from seismic events. Further, as set forth in NPM GEO-1, the Build Alternative would be designed and constructed in compliance with Metro Rail Design Criteria, which includes detailed requirements for planning and conducting a geotechnical investigation, geotechnical design methodologies, and reporting, such as the preliminary geotechnical investigation conducted in 2025 within the Study Area, which, as described in **Section 3.7.1**, confirmed that underlying soils are associated with alluvial sediments and groundwater at depths at or below 120 feet. Specific structural engineering recommendations identified in the geotechnical investigations required under NPM GEO-1 would be incorporated into the final design plans consistent with standard practice. The Build Alternative would also would comply with California Department of Transportation design criteria for aerial structures and the Los Angeles County Building Code requirements for structures as set forth in NMP GEO-1. Thus, the Build Alternative would not have long-term adverse effects relative to unstable soil geologic conditions and seismic hazards.

As discussed in **Section 3.7.1**, the Study Area is located in an urbanized area that is primarily impervious with no exposed soil. As discussed in **Section 3.10** (Water Resources), operation of the Build Alternative would not result in ground disturbance or a change in the amount of exposed soil as compared to existing conditions. A small increase in impervious surface would not lead to a meaningful change in the amount of runoff and associated erosion. The Build Alternative would comply with post-construction measures in applicable National Pollutant Discharge Elimination System permits and low impact development standards required by Los Angeles County and other local jurisdictions, which aim to minimize erosion impacts from development projects, as identified in NPM HWQ-1. As discussed in **Section 3.10**, the Build Alternative alignment, including MSF sites, is entirely within an area of minimal flood risk and would thus not be susceptible to flooding. Thus, the Build Alternative would not have long-term adverse effects relative to soil erosion.

As discussed in **Section 3.7.1**, the Study Area is within an area of generally flat topography and stable soils. It is not within a liquefaction zone. Therefore, risks associated with soil stability are minimal. Further, as identified in NPM GEO-1, the Build Alternative would be designed in accordance with recommendations developed based on detailed site-specific geotechnical investigations. Thus, the Build Alternative would not have long-term adverse effects related to soil stability.

As described in **Section 3.7.1**, expansive clay-rich soils may exist locally within alluvial soils present along the Build Alternative alignment. The Build Alternative would be constructed in compliance with applicable building codes and standards and as set forth in NPM GEO-1, in accordance with the recommendations contained in the detailed site-specific geotechnical investigations, including remediation of expansive soils if required. Thus, the Build Alternative would not have long-term adverse effects related to expansive soils.

Operation of the Build Alternative would not involve any ground-disturbance that could have an adverse effect on paleontological resources. Therefore, the Build Alternative would not have long-term adverse effects on paleontological resources.

3.7.4 Avoidance, Minimization, and Mitigation Measures for the Build Alternative

The measures identified in **Table 3.7-2** would be implemented for the Build Alternative in the long-term. Construction measures are provided in **Section 3.17**.

Table 3.7-2 Long-Term Avoidance, Minimization, and Mitigation Measures

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
Exposure to Seismic Hazards	Structural damage or safety risks due to regional seismic activity	NPM GEO-1 (Geotechnical Investigation). The Project shall be designed and constructed per the Metro Rail Design Criteria (MRDC). The MRDC incorporates various design specifications from the Federal Highway Administration (FHWA), California Department of Transportation (Caltrans), the State of California, the County of Los Angeles, and other sources by reference. Key compliance sections of the MRDC relative to geology and soils are Section 5.3, Section 5.4, Section 5.6, and MRDC Section 5 Appendix, Metro Supplemental Seismic Design Criteria. Section 5.6 of the MRDC provides detailed requirements for planning and conducting a geotechnical investigation, geotechnical design methodologies, and reporting. In addition, Caltrans and the Los Angeles County Building Code (based on the California Building Code [CBC]) have independent design criteria for aerial structures (Caltrans) and building structures (County of Los Angeles) that are also required. In accordance with the MRDC, geotechnical report recommendations shall be incorporated into the project plans and specifications. These recommendations shall be a product of final design and shall address potential subsurface hazards. Without these report recommendations, the project plans and specifications shall not be approved and the Project shall not be allowed to advance into the final design stage or into construction.	Project Measure	No Adverse Effect - Operational best management practices for the Build Alternative would be implemented
Soil Erosion	Negligible increase in impervious surface	NPM HWQ-1 (Operational Best Management Practices for Water Resources). Operational best management practices (BMP) may include but shall not be limited to: ▪ Treatment of stormwater runoff using infiltration BMPs such as detention basins or tanks, infiltration basins, bioretention facilities media filters, porous pavement, or vegetated filter strips to remove particulate pollutants. ▪ Development of a stormwater pollution prevention plan (SWPPP) in compliance with the State Water Resources Control Board (SWRCB) Industrial General Permit for maintenance and storage facility (MSF) operations. The SWPPP shall include BMPs such as: - o Preventing disposal of any rinse/wash waters or industrial materials into the stormwater conveyance system Establishing procedures for prompt maintenance and repair of equipment that may result in leaks and spills.	Project Measure	No Adverse Effect - Operational best management practices and runoff control measures would be implemented to control runoff and erosion

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
Soil Stability	Minimal risk as Build Alternative would operate in generally flat area with stable soils	NPM GEO-1 (defined previously)	Project Measure	No Adverse Effect - Operational best management practices for the Build Alternative would be implemented
Expansive Soils	Build Alternative located within potentially expansive soils	NPM GEO-1 (defined previously)	Project Measure	No Adverse Effect - Operational best management practices for the Build Alternative would be implemented
Paleontological Resources	Operations would not require ground-disturbance and would not affect paleontological resources	No avoidance, minimization, or mitigation measures needed	None	No Adverse Effect

Source: Metro; CDM Smith/AECOM JV 2026.

3.8 Visual Resources

This section evaluates the potential long-term effects of the No Build Alternative and the Build Alternative on visual resources. Short-term construction effects are discussed in **Section 3.17** (Construction).

The assessment of reasonably foreseeable effects in this section is based upon the temporal and geographic proximity parameters detailed in **Chapter 3.0** (Introduction).

3.8.1 Affected Environment

3.8.1.1 Study Area and Existing Visual Context

The Study Area for this analysis is approximately 0.5 mile to 2 miles from the guideway centerline, as described in **Section 3.1.1** (Study Area) with a focus on the area within 0.25 mile of the alignment and 0.5 mile of the stations where physical are most likely to occur, such as changes to surrounding land uses. This Study Area reflects the distance within which project features may be visible to viewers depending on topography, land use, and the scale of proposed infrastructure. Regulations for visual resources applicable to the Project are summarized in **Appendix S** (Regulatory Setting Summary).

Existing visual conditions were documented through field reconnaissance, review of aerial imagery, maps, and ground-level photography, which together provide an understanding of how the Study Area is experienced by the public. The Study Area is characterized by a flat, urbanized lowland plain with a built environment consisting of transportation corridors, industrial and commercial uses, residential neighborhoods, utility infrastructure, and scattered landscaping. There are no formally locally designated scenic vistas or scenic highways within the Study Area, nor are there State- or County-designated scenic highways with views of the project area. Depending on location and orientation, distant views of the Monterey Park hillside and San Gabriel Mountains to the north, Puente Hills to the east, and the downtown Los Angeles skyline to the west may be intermittently visible; however, these views are often limited or filtered by intervening development, vegetation, and infrastructure typical of a dense urban setting.

3.8.1.2 Visual Character and Visual Quality

Assessment of visual impacts considers how proposed project features would complement or contrast with the existing visual character and quality. Project elements that are consistent in scale, form, materials, and function with surrounding infrastructure are generally more compatible with the established visual character, whereas features that introduce noticeable contrasts may result in changes to visual character and quality. These may be beneficial or adverse changes, depending in part on viewer perception. In an urban environment such as the Study Area, visual quality is typically shaped by the compatibility of infrastructure and development with surrounding land uses rather than by scenic or natural features.

Visual character: overall visual identity of an area as defined by the arrangement, form, scale, and appearance of natural and built features, including land use patterns, buildings, transportation facilities, vegetation, and other physical elements; reflects how these elements combine to create a recognizable setting that is typical of a community or corridor.

Visual quality: relative level of visual interest, coherence, and visual appeal associated with that character; influenced by factors such as consistency of design, condition and maintenance of features, visual order or complexity, and the presence or absence of visually discordant elements.

3.8.1.3 Landscape Units and Viewsheds

For analytical purposes, the Study Area is divided into a series of landscape units, which are geographic segments that share similar visual character, land use patterns, and viewing conditions. Landscape units are defined based on factors such as changes in land use, roadway configuration, development density, and

transitions between industrial, commercial, residential, and transportation-oriented environments. Use of landscape units allows the analysis to:

- Organize the corridor into visually coherent areas.
- Identify distinct viewsheds and typical public viewing locations.
- Evaluate visual effects in relation to the specific visual character and quality of each unit.

This approach ensures that potential visual impacts are assessed in a context-sensitive manner rather than applying a uniform evaluation across the entire corridor. **Figure 3.8-1** shows the locations of viewpoints within each landscape unit. Figures displaying these viewpoints are provided in **Appendix T** (Landscape Unit Viewpoints). **Table 3.8-1** summarizes the existing visual characteristics of the Study Area by landscape unit. This information establishes the affected visual environment and provides the basis for evaluating potential visual changes and effects associated with the Build Alternative.

3.8.1.4 Visual Change and Noticeability

A visual change occurs when a project feature alters the existing visual environment in a way that can be perceived by viewers. Whether a change is noticeable depends on the physical characteristics of the existing environment, including existing scale, complexity, level of visual clutter, and degree of urbanization.

In highly developed urban settings, noticeable visual change typically relates to:

- Introduction of new structures or infrastructure that differ in height, massing, or form from existing features.
- Changes in visual continuity along transportation corridors.
- Alteration of familiar views experienced by viewers on a regular basis.

A change is considered noticeable when it is readily apparent to an observer under typical viewing conditions, rather than requiring focused attention or specialized vantage points.

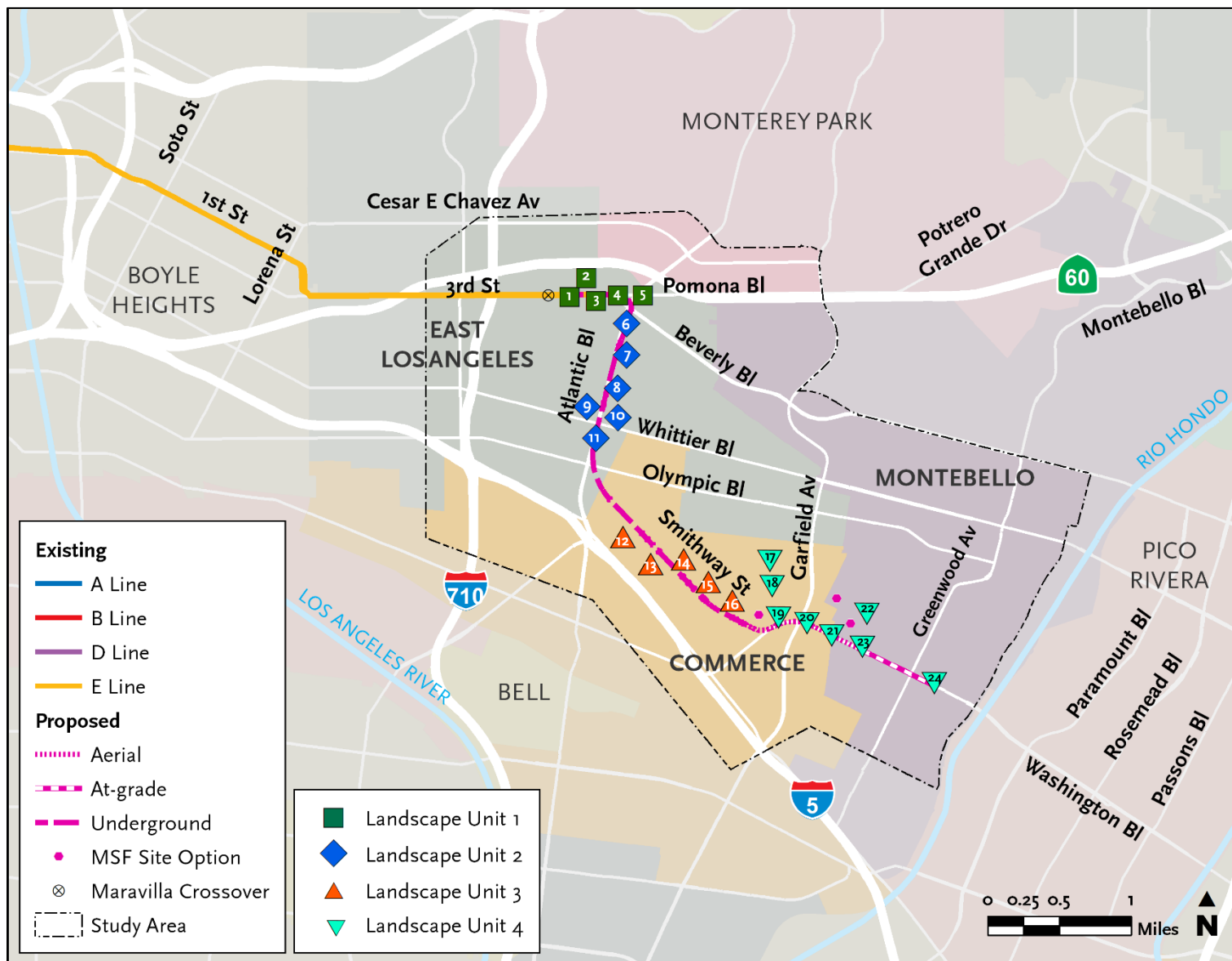
3.8.1.5 Viewers and Viewer Sensitivity

Viewers are individuals or groups who may experience views of the Project, including residents, workers, commuters, pedestrians, bicyclists, and users of nearby public spaces and roadways. Viewer groups are identified based on their location, activity, and frequency of exposure to the visual environment.

Viewer sensitivity reflects the degree to which a viewer group may be concerned with or responsive to changes in visual character and quality. Sensitivity is evaluated qualitatively based on:

- The context of the view (e.g., residential neighborhood versus industrial corridor).
- The duration and frequency of exposure (e.g., daily residents versus transient motorists).
- The expectations of viewers regarding visual conditions in that setting.
- The potential for project features to be perceived as inconsistent with community preferences.

The analysis considers whether project features could reasonably be perceived as visually controversial or likely to raise concerns within the community, such as by appearing incompatible with established neighborhood character or prompting opposition based on visual preferences. This evaluation does not assume opposition but assesses the potential for concern given the existing visual context and community setting.



Source: CDM Smith/AECOM JV 2026.

**Figure 3.8-1 Landscape Units and Locations of Photograph Viewpoints
(Photographs provided in Appendix T)**

Table 3.8-1 Existing Visual Characteristics by Landscape Unit

Landscape Unit	Landscape Unit Description	Land Uses	Key Visual Features	Views and Viewsheds	Primary Viewer Types	Visual Character and Quality	Viewer Sensitivity	Figure Reference
Landscape Unit 1 – 3rd Street (East Los Angeles)	3rd Street/Arizona Avenue east to Atlantic Boulevard/Pomona Boulevard; urban arterial corridor with adjacent civic and recreational uses.	Public facilities, parkland, transit infrastructure, medical uses, surrounding commercial uses.	Belvedere Park Lake/East Los Angeles Civic Center and landscaping; Metro E Line stations with public art and canopies; Edward R. Roybal Comprehensive Health Center façade featuring mosaic artwork and geometric patterns; street trees and landscaping.	Partial and intermittent distant views of the San Gabriel Mountains and Puente Hills; views filtered by development and infrastructure.	Local residents; park users; transit riders; pedestrians; bicyclists; motorists.	Civic- and transit-oriented visual character with integrated public art and landscaping; moderate to relatively high visual quality for an urban corridor.	Viewer sensitivity is moderate due to frequent exposure by residents, park users, and transit riders, and the presence of valued civic spaces and public art. Viewers are more likely to notice changes that affect park settings, station areas, or pedestrian-oriented environments.	Appendix T Figure 2 through Figure 6
Landscape Unit 2 – Atlantic Boulevard (East Los Angeles)	Atlantic Boulevard/Pomona Boulevard south to Goodrich Boulevard/Union Pacific Avenue; major north–south arterial with commercial frontage.	Commercial, institutional, retail, transportation corridor uses.	Saint Alphonsus Catholic Church; former Golden Gate Theater (CVS Pharmacy) with Spanish Churrigueresque-style façade; established commercial buildings and signage.	Limited background views of the San Gabriel Mountains; clearer views of Monterey Park hills to the north along Atlantic Boulevard.	Commuters; motorists; pedestrians; nearby residents; patrons of commercial and institutional uses.	Traditional urban commercial corridor with locally prominent architectural landmarks; visual quality varies along the corridor.	Viewer sensitivity is moderate, reflecting a mix of commuters and local users accustomed to change in a commercial corridor, but with heightened sensitivity near notable architectural and community landmarks.	Appendix T Figure 7 through Figure 12

Landscape Unit	Landscape Unit Description	Land Uses	Key Visual Features	Views and Viewsheds	Primary Viewer Types	Visual Character and Quality	Viewer Sensitivity	Figure Reference
Landscape Unit 3 – Smithway Street (City of Commerce)	Goodrich Boulevard/Union Pacific Avenue southeast across rail corridors to the SCE and BNSF right-of-way; industrial context with localized commercial destination.	Industrial uses; rail and utility infrastructure; regional retail.	Citadel Outlets with themed façade and prominent electronic signage; rail lines; utility infrastructure.	Views are largely internal and dominated by industrial and commercial features; limited scenic or distant views.	Shoppers and visitors to Citadel Outlets; employees; motorists; limited pedestrian activity outside retail areas.	Predominantly industrial visual character with a visually distinctive retail focal point; utilitarian visual quality with localized architectural contrast.	Viewer sensitivity is low to moderate, as many viewers are transient or employees accustomed to large-scale industrial and commercial features; sensitivity may be slightly higher in areas immediately adjacent to the Citadel Outlets where themed architecture establishes a stronger visual identity.	Appendix T Figure 13 through Figure 17
Landscape Unit 4 – Washington Boulevard (City of Montebello)	Saybrook Avenue east to Carob Way; six-lane major truck arterial; industrial and commercial corridor within Montebello.	Industrial uses; rail and utility infrastructure; regional retail.	Large warehouses; railroad crossings; billboards; wide roadway geometry; minimal landscaping.	Partial views of the San Gabriel Mountains and downtown Los Angeles skyline, secondary to dominant industrial features.	Truck drivers; motorists; industrial employees; minimal pedestrian presence.	Strongly industrial and transportation-oriented visual character; low to moderate visual quality.	Viewer sensitivity in Landscape Unit 4 is low because the setting is a utilitarian, industrial corridor where most viewers are transient motorists/truck drivers and industrial employees with limited viewing duration and expectations of transportation- and warehouse-dominated visuals.	Appendix T Figure 18 through Figure 25

Source: CDM Smith/AECOM JV 2026.

3.8.1.6 Assessment Process

The following steps were used to evaluate the existing visual environment and potential visual effects of the Project: (1) identify landscape units that reflect distinct visual character and viewing conditions; (2) identify existing visual resources, public viewpoints, and viewer groups that could experience noticeable visual change; and (3) assess potential visual effects by evaluating how Project features would alter visual character, visual quality, and viewer experience within each landscape unit. This methodology provides a structured, context-sensitive framework for evaluating visual resource impacts consistent with the *Guidelines for the Visual Impact Assessment of Highway Projects* (Federal Highway Administration 2015).

3.8.2 No Build Alternative

The No Build Alternative, as described in **Section 2.2** (No Build Alternative) of the EA, would include already planned and funded roadway and transit projects but would not provide a rail transit option for communities in eastern Los Angeles County. As shown in **Table 3.8-2**, the No Build Alternative, including already planned regional transit and roadway projects, would not degrade or enhance the visual character and quality of the Study Area. Therefore, the No Build Alternative would result in no long-term adverse effect on visual resources.

Table 3.8-2 Visual Resources Impact Summary – No Build Alternative

Topic	Impact	Rationale
Visual character and quality	No Adverse Effect	- Planned regional transit projects would generally occur within existing transportation corridors or on individual sites that are associated with transportation - Projects that would be built under the No Build Alternative would be required to undergo separate environmental reviews to determine the individual project's environmental effects and mitigation, as necessary

Source: Metro; CDM Smith/AECOM JV 2026.

3.8.3 Build Alternative

As previously described in **Section 3.8.1**, no scenic vistas are present in the Study Area. As shown in **Table 3.8-3**, the Build Alternative would alter the visual character in some areas, but would not substantially degrade visual quality across any landscape unit. Thus, no adverse visual effects are anticipated.

Table 3.8-3 Long-Term Impacts

Landscape Unit	Key Visual Elements	Effect Description	Conclusion
1	Maravilla Crossover, trench for transition to underground alignment on 3rd Street, Sheriff's Department access road, access plaza for the Atlantic/Pomona station	Visual changes under the Build Alternative would be limited and would not result in long-term adverse effects on visual character, visual resources, visual quality, or viewers. Open Trench: Would create a new visual feature, however, its materials and linear configuration would be visually consistent with the existing transportation-oriented character of 3rd Street, which already contains rail infrastructure, paved roadways, barriers, signage, and other engineered elements. Trench would appear as an extension of the roadway and transit corridor rather than a visually discordant element. Sheriff's Department Access Road and Crosswalk: Would be consistent with the existing visual environment and not substantially alter views or visual continuity. These features are typical of urban transportation corridors and would be perceived by viewers as functional roadway elements rather than incompatible visual intrusions. Station Entries, Plazas, and Related At-Grade Facilities: Would require permanent alterations to select commercial parcels and demolition of buildings. These facilities would be designed to integrate with the surrounding urban context through the use of landscaping, architectural and design elements, and coordinated materials and finishes. Station plazas would be designed to enhance the pedestrian environment and reinforce the civic and transit-oriented character already present. In coordination with Metro Art, efforts would be made, as feasible, to relocate existing artwork from the Atlantic Station to the new Atlantic/Pomona station, maintaining continuity of visual character. Effect: The Build Alternative would not obstruct or substantially alter views of the San Gabriel Mountains to the north or the Puente Hills to the east. Viewer sensitivity in Landscape Unit 1 is moderate due to frequent exposure by residents, park users, and transit riders; however, because the Build Alternative would be visually consistent with the existing transportation setting and include design enhancements, there would be no long-term adverse effect.	Visual character and quality not substantially degraded. No long-term adverse effect.

Landscape Unit	Key Visual Elements	Effect Description	Conclusion
2	Atlantic/Whittier access plaza and underground station, antenna structure	Visual changes from the Build Alternative would be limited and would not result in long-term adverse effects on visual character, visual resources, visual quality, or viewers. Atlantic/Whittier Station: Guideway would be underground, and visual impacts from the Build Alternative would be limited to surface-level station entrances, plazas, and associated features. The station plaza would be consistent with visual character and support a sense of place within the neighborhood commercial area. Emergency egress components and station infrastructure would be designed to minimize visual prominence and would not interfere with existing surface-level features. Would result in permanent alterations to select commercial parcels and demolition of buildings to accommodate station entries, plazas, and related surface-level facilities. These at-grade elements would be designed to integrate with the existing commercial corridor through pedestrian-friendly layouts, landscaping, architectural detailing, and materials compatible with the surrounding land uses. Antenna Structure and Other Project Elements: Would be compatible with the surrounding urban infrastructure and would not alter the overall visual landscape. Effect: The Build Alternative would not substantially obstruct background views of the San Gabriel Mountains or the Monterey Park hills to the north, nor would it result in adverse visual effects on Atlantic Park, Saint Alphonsus Catholic Church, or the historic former Golden Gate Theater. Viewer sensitivity in Landscape Unit 2 is moderate, reflecting a mix of commuters and local users in a commercial corridor; however, given the limited visibility of Build Alternative elements and context-sensitive design of these elements, there would be no long-term adverse effect.	Visual character and quality not substantially degraded. No long-term adverse effect.
3	Commerce/Citadel access plaza and underground station, underground guideway, 60 feet tall antenna structure, outdoor shelter	Visual changes from the Build Alternative would be limited and would not result in long-term adverse effects on visual character, visual resources, visual quality, or viewers. Commerce/Citadel Station: Guideway would be underground. Visual impacts would be limited to surface-level elements station entrances, antenna, and outdoor shelter, and would be compatible with the industrial and commercial context of the area. Would result in permanent alterations to select commercial parcels and demolition of buildings to accommodate station entries, plazas, and related surface-level facilities. Features would be visually cohesive with existing commercial and industrial development and infrastructure and would not disrupt the established visual character. Facilities would integrate with the surrounding urban context through landscaping, architectural and design elements, and coordinated materials and finishes. Effect: The Build Alternative would not result in visual changes to the themed façade of the Citadel Outlets along Telegraph Road or on the Commerce Casino and Hotel along Tubeway Avenue. Viewer sensitivity in this landscape unit is generally low to moderate, as viewers are accustomed to large-scale commercial and industrial features; therefore, the visual effects would not be adverse.	Visual character and quality not substantially degraded. No long-term adverse effect.

Landscape Unit	Key Visual Elements	Effect Description	Conclusion
4	Aerial and at-grade guideway, tunnel portal east of Saybrook Avenue, retaining wall, supporting columns and bents, Greenwood station, MSF site options	Visual changes from the Build Alternative would be limited and would not result in long-term adverse effects on visual character, visual resources, visual quality, or viewers. Aerial Guideway and At-Grade Facilities: Would introduce new permanent visual elements into an area characterized by industrial land uses, large buildings, rail crossings, and other transportation infrastructure. Would represent a noticeable visual change; however, it would be visually consistent with the existing industrial and transportation-oriented character of Washington Boulevard. MSF Site 1 or Site 3: Aerial support columns would be located within the center of Washington Boulevard, reinforcing the corridor's existing role as a major transportation and truck route. MSF Site 2: Aerial structure would be located north of Washington Boulevard within the Pacific Metals Company parking lot. The Pacific Metals Company building would not be physically altered, and the new structure would not affect character-defining features or historic integrity. The introduction of the aerial guideway would not substantially degrade visual quality or public views, given the already industrialized context. See Section 3.5 (Historic, Archaeological, and Tribal Resources) for additional information on the Pacific Metals Company building. New Surface Parking, Electrical Equipment, and Station-Related Facilities: Demolition and replacement of buildings to accommodate the MSF site and facilities associated with the proposed Greenwood station would result in permanent alterations to commercial and industrial parcels. This change would be visually noticeable but consistent with surrounding land uses and infrastructure. The new facilities would be designed to integrate with the industrial corridor through appropriate siting, landscaping, and architectural treatments, minimizing visual contrast. As shown in Figure 3.8-2, the at-grade guideway and Greenwood station would not substantially alter the overall visual character or quality of the surrounding environment. Effect: Minimal views of the San Gabriel Mountains to the north may be slightly obstructed by the aerial guideway; however, these views are already largely limited by existing urban and industrial development. Views of the downtown Los Angeles skyline to the west would not be substantially affected. Viewer sensitivity in Landscape Unit 4 is low due to expectations associated with an industrial corridor; therefore, the visual effects would not be adverse.	Visual character and quality altered but not substantially degraded. No long-term adverse effect.

Source: Metro; CDM Smith/AECOM JV 2026.



Figure 3.8-2 Visual Simulation: Washington Boulevard at Greenwood Avenue
(Looking east)

3.8.4 Avoidance, Minimization, and Mitigation Measures for the Build Alternative

The measures identified in Table 3.8-4 would be implemented for the Build Alternative in the long term. Construction measures are provided in Section 3.17.

Table 3.8-4 Long-term Avoidance, Minimization, and Mitigation Measures

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
Landscape Unit 1	Visual changes to Landscape Unit 1, including Maravilla Crossover, trench for transition to underground alignment on 3rd Street, Sheriff's Department access road, access plaza for the Atlantic/Pomona station	No avoidance, minimization, or mitigation measures needed	None	No Adverse Effect
Landscape Unit 2	Visual changes to Landscape Unit 2, including Atlantic/Whittier access plaza and underground station, antenna structure	No avoidance, minimization, or mitigation measures needed	None	No Adverse Effect
Landscape Unit 3	Visual changes to Landscape Unit 3, including Commerce/Citadel access plaza and underground station, underground guideway, 60 feet tall antenna structure, outdoor shelter	No avoidance, minimization, or mitigation measures needed	None	No Adverse Effect
Landscape Unit 4	Visual changes to Landscape Unit 4, including Aerial and at-grade guideway, tunnel portal east of Saybrook Avenue, retaining wall, supporting columns and bents, Greenwood station, MSF site options	No avoidance, minimization, or mitigation measures needed	None	No Adverse Effect

Source: Metro; CDM Smith/AECOM JV 2026.

3.9 Hazardous Materials

This section evaluates the potential long-term effects of the No Build Alternative and the Build Alternative relative to hazardous materials, as detailed in **Appendix J** (Hazardous Materials Impacts Report). Short-term construction effects are discussed in **Section 3.17** (Construction).

The assessment of reasonably foreseeable effects in this section is based upon the temporal proximity parameters detailed in **Chapter 3.0** (Introduction), and the geographic proximity parameters detailed in **Section 3.9.1** (Affected Environment).

3.9.1 Affected Environment

Hazardous Materials Study Area

- **Build Alternative Buffer:** 0.25 mile buffer from the alignment, stations, construction staging areas, Maravilla Crossover, and MSF site options
 - Evaluates properties that have confirmed releases of hazardous materials that could contain potentially affected soil and/or groundwater in the vicinity of the Build Alternative, and thus potentially expose individuals or the environment to health and safety risks

Regulations for hazards and hazardous materials applicable to the Project are summarized in **Appendix S** (Regulatory Setting Summary) and detailed in **Appendix J**.

The Project is located in a developed area within the Cities of Commerce and Montebello and a portion of the East Los Angeles community in unincorporated Los Angeles County. Existing land uses within the study area include residential, commercial, industrial, retail, and public and civic land uses. The City of Commerce has a major activity center (the Citadel Outlets) within the study area.

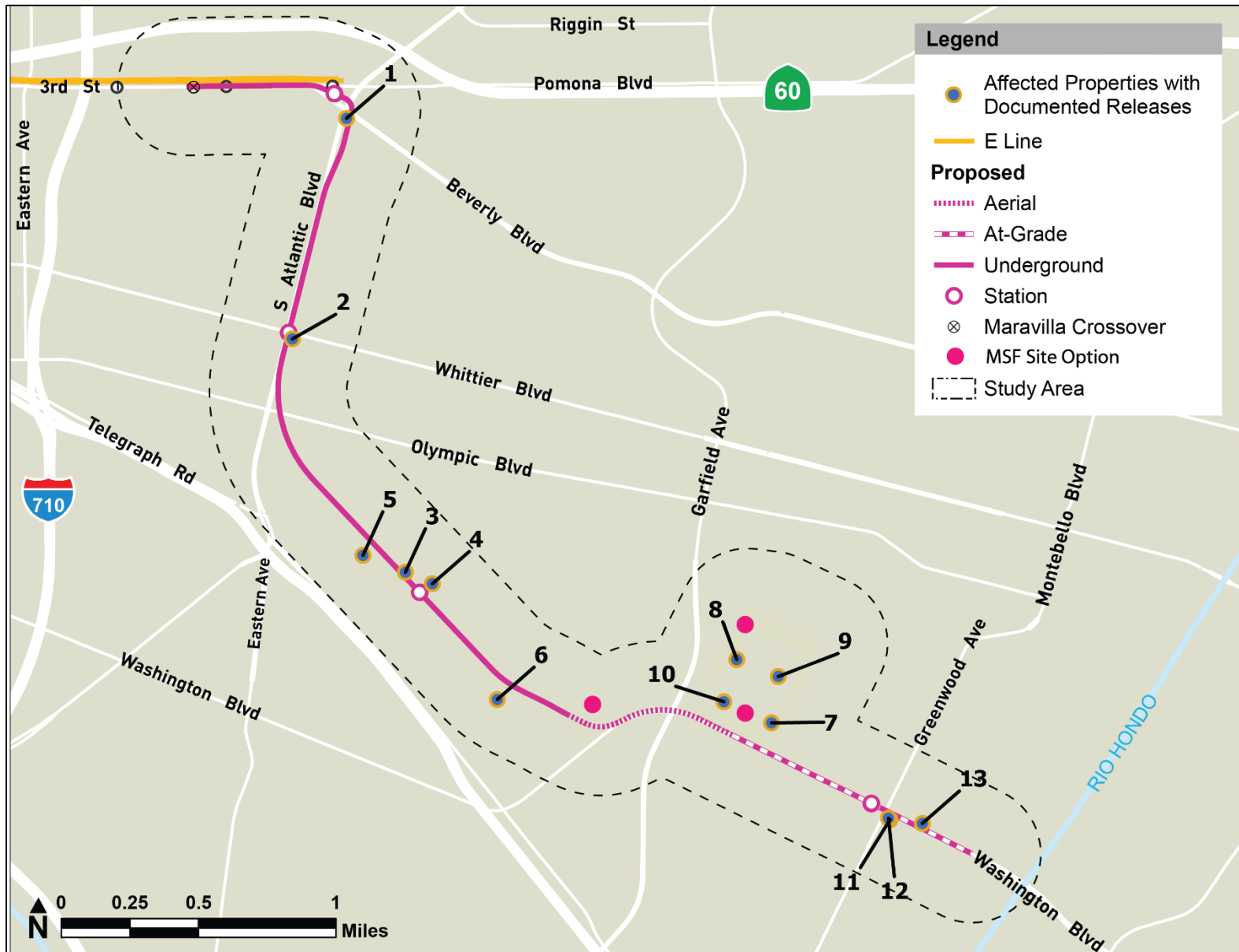
3.9.1.1 Methodology

A review of databases available from federal, state, and local regulatory agencies, the Environmental Data Resources Report, the Initial Site Assessment report, visual survey, aerial imagery, and official zoning maps and field reconnaissance and observations were conducted for this evaluation.

A government agency database records search was conducted by Environmental Data Resources (EDR) Inc. on November 15, 2024 (EDR Inc. 2024). The records search identified properties located in the general vicinity of the Build Alternative that may have contributed to the release of hazardous substances (e.g., spills, leaks, and incidents). Additional information related to known hazardous materials releases was obtained from Final Initial Site Assessment Report (Kleinfelder 2021). The visual survey during the site reconnaissance included observation of the Build Alternative area and the adjacent properties.

3.9.1.2 Existing Setting

Figure 3.9-1 illustrates the location and **Table 3.9-1** provides a summary of the identified affected properties, which are properties that were subject to documented releases. **Table 3.9-1** provides a summary of the identified affected properties including business addresses, assessor's parcel numbers, construction purpose of each property, proximity of the property to the Build Alternative, and a summary of the status of each property. Additional information is provided in **Appendix J**. In addition to these affected properties with documented releases, additional properties were identified that may have potential subsurface contamination from undocumented releases associated with current and/or historical uses of the properties (e.g., former railroad corridors, former gas stations, former dry cleaners, or former industrial properties). These additional properties are summarized in **Table 3.9-1** and the details are provided in **Appendix J, Attachment A, Table A-1**, and **Figure A-1**.



Source: CDM Smith/AECOM JV 2025; EDR Inc. 2024.

Figure 3.9-1 Affected Properties with Documented Releases

Table 3.9-1 Affected Properties with Previous Documented Releases

Site Number	Business Name and Address	Assessor's Parcel Number	Construction Purpose	Property Status	Proximity to Build Alternative Alignment
1	Shell Gas Station 300 Atlantic Boulevard	6341-001-038	Construction staging (Atlantic Station)	Closed Leaking Underground Storage Tank case (former Unocal). ▪ Release of gasoline that affected soil. ▪ Closed by the Los Angeles Regional Water Quality Control Board in 1998 (GeoTracker number T0603704571). ▪ Residual soil contamination may be present.	Southeastern corner of the intersection of Beverly Boulevard and Atlantic Boulevard
2	76 Station 5200 Whittier Boulevard	6340-001-001	Construction staging (Atlantic/Whittier station)	Two closed Leaking Underground Storage Tank case (former ARCO). ▪ Associated with petroleum hydrocarbon-contaminated soil and groundwater. ▪ Closed by the Los Angeles Regional Water Quality Control Board in 1996 and 2010 (GeoTracker number T0603702801). ▪ Remedial activities included soil excavation and soil vapor extraction. ▪ Residual contamination may be present.	Southeastern corner of the intersection of Atlantic Boulevard and Whittier Boulevard
3	MGM Transformer Co. 5701 Smithway Street	6336-021-013	Construction easement	Closed Department of Toxic Substances Control evaluation site. ▪ Former transformer manufacturer and metals plating facility. ▪ Volatile organic compound contamination (including chlorinated solvents) in soil from past activities. ▪ Closed by the Department of Toxic Substances Control in 2011. ▪ Volatile organic compound and chlorinated solvent contamination may have contributed to groundwater contamination.	North of Smithway Street and The Citadel Outlets
4	Dreyer's Grand Ice Cream 5743 Smithway Street	6336-021-015	Construction easement	Closed Leaking Underground Storage Tank case. ▪ Release of gasoline that affected soil. ▪ Closed by the Los Angeles Regional Water Quality Control Board in 1996. ▪ Residual contamination may be present.	North of Smithway Street and The Citadel Outlets

Site Number	Business Name and Address	Assessor's Parcel Number	Construction Purpose	Property Status	Proximity to Build Alternative Alignment
5	Uniroyal Facility 5675 Telegraph Road (also Citadel Shopping Center 5600 Flotilla Street)	6336-019-030	Commerce/ Citadel station	Closed Leaking Underground Storage Tank case (Uniroyal Facility [5675 Telegraph Road]). - Soil contamination (total petroleum hydrocarbons) and groundwater contamination (volatile organic compounds and metals) from former tire manufacturing activities (GeoTracker number T0603702655, Los Angeles Regional Water Quality Control Board case number I-00031). - Petroleum hydrocarbon-impacted soil encountered during grading (up to 20 feet below ground surface). - The Los Angeles County Fire Department and Los Angeles County Department of Public Works issued closure letters for non-underground storage tank related issues. - Soil cleanup associated with the underground storage tanks was deemed completed by the Los Angeles Regional Water Quality Control Board in 1996. - The Los Angeles Regional Water Quality Control Board B indicated that no further action/remediation was required; however, the Los Angeles Regional Water Quality Control Board should be notified if additional soil/groundwater contamination is encountered during future activities, and existing groundwater monitoring wells should remain.	Southern corner of the intersection of Flotilla Street and Hoefner Avenue
6	Zero Ten Corp. 2230-2250 Tubeway Avenue	6336-016-014	Below grade/tunnel	Department of Toxic Substances Control Evaluation case (JP Original Corp. Hsueh Trust). - Referred to Los Angeles County in 2004 and listed as a Los Angeles County Site Mitigation case but no specific details were available (GeoTracker number 19000024). - Potential for contamination.	Southeast of Tubeway Avenue, approximately 250 feet south of Smithway Street
7	Allied Feather & Down 6905 Acco Street	6336-002-033	MSF Site 1	Closed Cleanup Program Sites- Spills, Leaks, Investigations, and Cleanups case. - Release of volatile organic compounds. - Closed in 2000. - Potential for residual contamination.	Approximately 500 feet northeast of Washington Boulevard, just west of Vail Avenue

Site Number	Business Name and Address	Assessor's Parcel Number	Construction Purpose	Property Status	Proximity to Build Alternative Alignment
8	Gardner Trucking 2100 Yates Avenue (includes 8 Vail Avenue)	6336-002-018; 6336-002-019	MSF Site 2	Former Land Disposal Site (Vail Avenue Land Reclamation Project). - Formerly used as a disposal sump for waste mud and water from Richfield Oil Company's well drilling operations (GeoTracker number T110000004258, Los Angeles Regional Water Quality Control Board case number 60-052). - The dumping operations were terminated, and approximately 800,000 cubic yards of soil were removed. - The remaining pit was used for dumping that included furnace slag, refractory waste, concrete segments, and sludge, refuse, broken concrete, asphalt, and dirt until street level was reached - Concrete tilt-up structures were constructed on the property in the 1980s. - Potential for encountering subsurface debris associated with past dumping activities.	Approximately 1,000 feet north-northeast of Washington Boulevard, west of Vail Avenue
9	Bella + Canvas 825 Vail Avenue	6336-002-020	MSF Site 1	Former Closed Landfill Disposal Site (Vail Avenue Land Reclamation Project associated with the main address of 2100 Yates Avenue listed above). - Solid inert material (e.g., furnace slag, refractory waste, concrete segments, mill scale, and sludge, asphalt, dirt, and refuse) were disposed in a former pit until the pit was filled to street level (from 1985 until 1988) (GeoTracker number T110000004258, Los Angeles Regional Water Quality Control Board case number 60-052). - Potential for encountering subsurface debris associated with past dumping/filling activities.	Approximately 1,000 feet north-northeast of Washington Boulevard, east of Vail Avenue
10	Katzkin 6868 Acco Street	6336-003-071	MSF Site 1	Closed Leaking Underground Storage Tank case (former John M. Fulmer Company). - Release of gasoline that affected soil. - Closed by the County of Los Angeles in 1992 (GeoTracker number T0603704232, Los Angeles Regional Water Quality Control Board case number I-14947). - Potential for residual soil contamination.	Approximately 250 feet northeast of Washington Boulevard, and 400 feet northwest of Vail Avenue

Site Number	Business Name and Address	Assessor's Parcel Number	Construction Purpose	Property Status	Proximity to Build Alternative Alignment
11	Jack in the Box 851 Washington Boulevard	6352-007-059; 6352-007-060	Construction staging (Greenwood station)	Open Leaking Underground Storage Tank case (former California Target #100 gas station). - Release of gasoline to soil and groundwater. - Listed as open as of 2006 (GeoTracker number T0603705207, Los Angeles Regional Water Quality Control Board case number R-13860). - Being considered for closure under the Low-Threat Closure Policy. - Potential for soil and groundwater contamination.	South of Washington Boulevard, approximately 200 feet southwest of Montebello Boulevard
12	Jack in the Box 869 Washington Boulevard	6352-007-059; 6352-007-060	Construction staging (Greenwood station)	Open Leaking Underground Storage Tank case (former California Target #100 gas station). - Release of gasoline to soil and groundwater. - Case listed as open as of 2006 (GeoTracker number T0603705207, Los Angeles Regional Water Quality Control Board case number R-13860). - Being considered for closure under the Low-Threat Closure Policy. - Potential for soil and groundwater contamination.	South of Washington Boulevard, approximately 200 feet southwest of Montebello Boulevard
13	Westrux International; Michelin 812 Washington Boulevard	6352-027-011	Construction easement	Closed Spills, Leaks, Investigations, and Cleanups case (Westrux International Trucks). - Release discovered during removal of a clarifier. - Closed by the Los Angeles Regional Water Quality Control Board in 1998. - Potential for residual contamination.	North of Washington Boulevard, approximately 200 feet northwest of Montebello Boulevard

Sources: Kleinfelder 2021; State Water Resources Control Board 2023; EDR Inc. 2024, CDM Smith/AECOM JV 2026, **Appendix J**.

Table 3.9-2 shows the pipelines and oil and gas wells that are in close proximity to, or passing through, the study area (United States Department of Transportation Pipeline and Hazardous Materials Safety Administration 2025; Hart Energy 2018; Southern California Gas Company 2025). The locations of the pipelines are shown in **Appendix J, Attachment A**, Figure A-2, and the oil and gas well are shown in **Appendix J, Attachment A**, Figure A-3. The potential for soil and groundwater contamination from undocumented releases, may be encountered during ground-disturbing activities and are further discussed in **Appendix J**.

Table 3.9-2 Pipelines and Oil and Gas Wells Near or Intersecting the Study Area

Pipeline	Description
Matrix Oil Corporation (Operator Identification [ID] 39497)	Operates a crude oil pipeline (ID 4IN East Los Angeles Oil) as part of the 4-inch East Los Angeles – Oil Sales Line system. As of February 1, 2018, the pipeline was reported active and filled. The pipeline is depicted along Leo Avenue near its intersection with Triumph Street in the City of Commerce and continues southwesterly beyond Interstate 5. An accidental release was reported (Report Number 20120207) from this pipeline due to corrosion in 2012 at the intersection of Leo Avenue and Triumph Street approximately 1 mile west of the MSF. Approximately 0.6 barrels of crude oil was lost, of which 0.4 barrels of crude oil was recovered.
Crimson Pipeline L.P. (Operator ID 32103)	Operates a crude oil pipeline (ID 46) associated with its Northam System and Montebello Terminal to Compton Junction Sub-System. As of August 10, 2017, the pipeline was indicated to be active and filled. The pipeline follows a northeast/southwest-trending railroad corridor located between Tubeway Avenue and Saybrook Avenue and passes through the Build Alternative alignment where it intersects the railroad corridor south of Tubeway Avenue. The Build Alternative alignment would be underground at this location.
Chevron Pipeline Company (Operator ID 2731)	Operates a gasoline, diesel, and/or jet fuel pipeline (ID CAL0319) as part of its “California United Safety Association P/LS-Co. Calif. Products” System and “El Segundo-Montebello Product Pipeline” Subsystem. As of June 12, 2018, this pipeline was indicated to be active and filled. The pipeline follows a northeast-southwest-trending railroad corridor located between Tubeway Avenue and Saybrook Avenue and passes through the Build Alternative alignment where the alignment intersects the railroad corridor south of Tubeway Avenue. The Build Alternative alignment would be underground at this location.
Chevron Pipeline Company (ID CAL0326)	Operates a natural gas pipeline as part of its “California United Safety Association Pipeline-So. Calif. Gas” System and “Los Angeles River JCT-Montebello Gas Pipeline” Subsystem. As of October 25, 2018, this pipeline was indicated to be active and filled. The pipeline follows a northeast-southwest-trending railroad corridor located between Tubeway Avenue and Saybrook Avenue and passes through the Build Alternative alignment where it intersects the railroad corridor south of Tubeway Avenue. The Build Alternative alignment would be underground at this location.
Southern California Gas Company	High Pressure Distribution Lines operated by Southern California Gas are located near the Build Alternative and pipelines that cross the alignment are located between Goodrich Boulevard and Tubeway Avenue. The Southern California Gas high pressure distribution lines are also located southwest of the Build Alternative, along Interstate 5.
Oil and Gas Wells	The Build Alternative alignment from approximately Union Pacific Avenue to Garfield Avenue passes through the Bandini Oil Field and Los Angeles East Oil Field. Active oil and gas wells, plugged dry oil and gas wells, and idle oil and gas wells are located in the vicinity of the alignment west of Tubeway Avenue, two plugged and abandoned dry holes are located under the Citadel Outlets parking lot southwest of Smithway Street, and one plugged and abandoned oil and gas well is located southeast of Saybrook Avenue and Gayhart Street.

Source: CDM Smith/AECOM JV 2026, **Appendix J**.

3.9.2 No Build Alternative

The No Build Alternative, as described in **Section 2.2** (No Build Alternative) of the EA, would include already planned and funded roadway and transit projects but would not provide a rail transit option for communities in eastern Los Angeles County. Under the No Build Alternative, the use, transportation, storage, and/or disposal of hazardous materials would be subject to federal, state, and local regulations. Already planned transit and roadway projects would follow an established comprehensive regulatory framework in addition to the environmental review process.

Overall, as shown in **Table 3.9-3**, with adherence to and compliance with applicable existing regulations, the No Build Alternative would result in no long-term adverse effect related to hazardous materials.

Table 3.9-3 No Build Alternative Impact Summary

Topic	Impact	Rationale
Transportation, Storage, Use and Disposal of Hazardous Materials; Release of Hazardous Materials; and Hazardous Material Sites	No Adverse Effect	- Already planned transit and roadway projects are required to undergo separate environmental reviews to determine the individual projects' environmental effects and mitigation, as necessary, and to follow federal, state, and local regulations. - Should the use and/or storage of hazardous materials rise to a level subject to regulations, those uses would be required to comply with federal and state laws to eliminate or reduce the consequence of hazardous materials accidents resulting from routine use, disposal, and storage of hazardous materials. - Hazardous materials encountered during operational activities would be disposed of in compliance with all applicable regulations for the handling of such waste.

Source: Metro; CDM Smith/AECOM JV 2026.

3.9.3 Build Alternative

3.9.3.1 Transportation, Storage, Use, and Disposal of Hazardous Materials

The Build Alternative including stations and MSF maintenance activities would involve the use of small amounts of hazardous substances such as oil, grease, solvents, paints, common household-type cleaning materials, and pesticides, which are commonly used in maintenance. The quantities of these hazardous substances routinely in use or stored are unlikely to result in an abnormally high increase in the amounts of hazardous materials and/or waste transported to the surrounding areas. It is not anticipated that the transportation, use, disposal and/or storage of hazardous materials would rise to a level subject to regulation, or that those uses would be required to comply with federal and state laws to eliminate or reduce the consequence of hazardous materials accidents resulting from operation of the Build Alternative. Operation of the Build Alternative would not require the handling of hazardous or other materials that would result in the production of large amounts of hazardous waste. Hazardous wastes generated by the Build Alternative would be disposed of in compliance with all applicable regulations for the handling of such waste, reducing effects related to the disposal of hazardous wastes.

The Build Alternative would implement NPM HAZ-1 to implement best management practices in the long-term. Cleaning and maintenance products would be labeled with appropriate cautions and instructions for handling, storage and disposal, and would not represent a significant threat to human health and the environment. Staff would be required to use, store, and dispose of these materials properly in accordance with label directions. If the quantity of hazardous materials used, handled, or stored on-site exceeds regulatory thresholds, an established comprehensive regulatory framework independent of the NEPA process (i.e., all applicable existing federal, state, and local regulations pertaining to hazardous materials identified in **Table 3.9-1** and Section 3.0 of

Appendix J) would be followed. In addition, operation of the MSF would comply with existing regulations, as set forth in NPM HAZ-3. With adherence to existing regulations and implementation of NPM HAZ-1 and NPM HAZ-3, the Build Alternative would result in no long-term adverse effect related to the transportation of hazardous materials, use and/or storage of hazardous materials, or disposal of hazardous waste.

3.9.3.2 Release of Hazardous Materials

The Build Alternative would not create a significant hazard to the public or the environment involving the release of hazardous materials into the environment during use and storage. Hazardous material used and stored for the Build Alternative would be limited to common hazardous materials such as maintenance and cleaning products, and pesticides.

Hazardous materials that could be stored would generally be in the form of routinely used common chemicals. Therefore, the probability of a major hazardous materials incident would be unlikely. Minor incidents would be more likely, but the consequences of such accidents would likely not be severe due to the types of common chemicals anticipated to be used at the MSF. The Build Alternative would implement best management practices during operation, as identified in NPM HAZ-1. In addition, the MSF would comply with NPM HAZ-3 to ensure that operation of the MSF would comply with existing regulations if the quantity of hazardous materials used, handled, or stored onsite were to exceed the regulatory thresholds, including preparation of a Hazardous Materials Business Plan. With adherence to existing regulations, and implementation of NPM HAZ-1 and NPM HAZ-3, the Build Alternative would result in no long-term adverse effect related to the release of hazardous materials.

3.9.3.3 Hazardous Materials Sites

Table 3.9-1 provides a summary of the identified properties with documented releases. In addition to these affected properties with documented releases, additional properties were identified that may have potential subsurface contamination from undocumented releases associated with current and/or historical uses of the properties (e.g., former railroad corridors, former gas stations, former dry cleaners, or former industrial properties). Refer to **Appendix J** for additional information.

There are hazardous site conditions for the Build Alternative related to properties listed on hazardous materials sites required by California Government Code Section 65962.5. As discussed in **Section 3.18**, any health risks to the public and/or the environment associated with the release of hazardous materials would be mitigated during construction and would not occur after construction is complete. No ground-disturbing activities would occur during operations that could result in hazardous releases of contaminated soil from listed hazardous materials sites, thereby creating a significant hazard to the public or the environment. Therefore, the Build Alternative would result in no long-term adverse effects related to listed hazardous materials sites.

3.9.4 Avoidance, Minimization, and Mitigation Measures for the Build Alternative

The following measures identified in **Table 3.9-4** would be implemented to avoid and/or minimize adverse effects for the Build Alternative in the long-term. Construction measures are provided in **Section 3.17**.

Table 3.9-4 Long-Term Avoidance, Minimization, and Mitigation Measures

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
Transportation, Storage, Use and Disposal of Hazardous Materials	Potential hazardous materials effects from transportation, storage, use, or disposal of hazardous materials during operation of the Build Alternative	NPM HAZ-1 (Operational Best Management Practices for Hazardous Materials). Operational best management practices (BMP) for the Build Alternative shall include but not be limited to: ▪ Cleaning and maintenance products shall be required to be labeled with appropriate cautions and instructions for handling, storage and disposal. Staff shall be required to use, store, and dispose of these materials properly in accordance with label directions. ▪ Storage and disposal of hazardous materials and waste shall be conducted in accordance with all applicable federal and state regulatory requirements, such as the Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Hazardous Materials Release Response Plans and Inventory Law, and the Hazardous Waste Control Act, and if a spill does occur, it shall be remediated in accordance with all applicable federal and state regulatory requirements and in coordination with the California Department of Toxic Substances Control (DTSC) and/or Los Angeles Regional Water Quality Control Board (LARWQCB). NPM HAZ-3 (Operational Best Management Practices for Maintenance and Storage Facility for Hazardous Materials). Operational (post construction) best management practices (BMP) for the maintenance and storage facility (MSF) shall include but shall not be limited to: ▪ If the quantity of hazardous materials used, handled, or stored on-site would exceed the regulatory thresholds, of 55 gallons for a hazardous liquid; 500 pounds of a hazardous solid; 200 cubic feet for any compressed gas; or threshold planning quantities of an extremely hazardous substance per Chapter 6.95 California Health and Safety Code, Metro shall prepare a Hazardous Materials Business Plan in accordance with all related requirements of the California Health and Safety Code, Chapter 6.95, Articles 1 and 2. The plan shall be reviewed and recertified every year and amended as required by the Health and Safety Code, Chapter 6.95, Articles 1 and 2.	Project Measures	No Adverse Effect - Operational best management practices would be implemented for the Build Alternative and MSF operations

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
Release of Hazardous Materials	Potential release of hazardous materials effects during operation of the Build Alternative.	NPM HAZ-1 (defined previously) NPM HAZ-3 (defined previously)	Project Measures	No Adverse Effect - Operational best management practices would be implemented for the Build Alternative and MSF operations
Hazardous Materials Sites	Potential hazardous materials sites effects during operation of the Build Alternative	No avoidance, minimization, or mitigation measures needed	None	No Adverse Effect

Source: CDM Smith/AECOM JV 2026, **Appendix J**.

3.10 Water Resources

This section evaluates the potential long-term effects of the No Build Alternative and the Build Alternative on water quality, groundwater supply and recharge, drainage, and wetland and floodplains. Short-term construction effects are discussed in **Section 3.17** (Construction).

The assessment of reasonably foreseeable effects in this section is based upon the geographic and temporal proximity parameters detailed in **Chapter 3.0** (Introduction).

3.10.1 Affected Environment

The Study Area is the 0.5-mile to 2-mile radius from the guideway centerline described in **Section 3.1.1** (Study Area) to focus on the area where impacts are most likely to occur, such as changes in stormwater runoff and drainage. Regulations associated with water resources applicable to the Project are summarized in **Appendix S** (Regulatory Setting Summary).

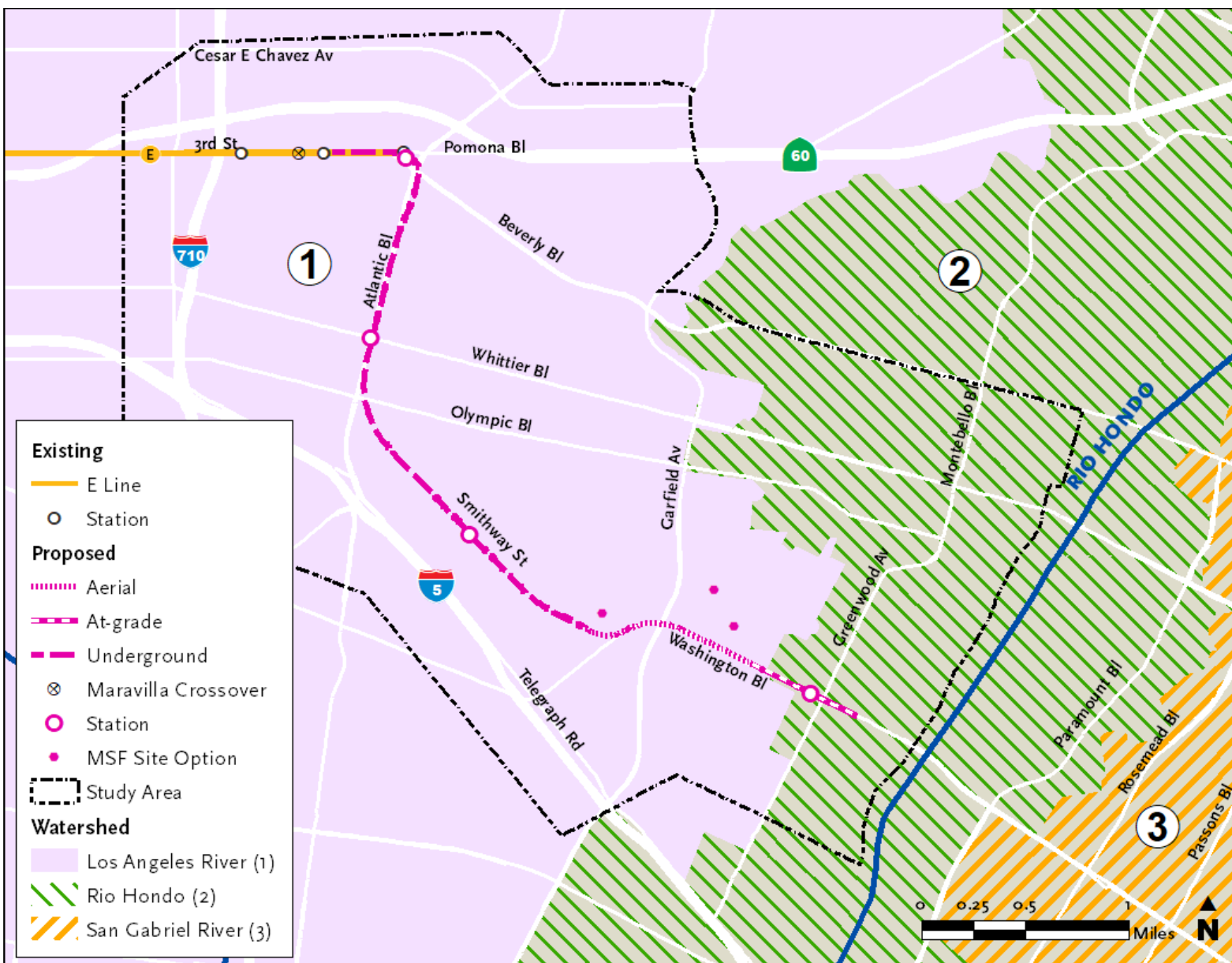
To evaluate potential effects, regional data on water quality, groundwater, drainage, and flood risks were analyzed. This assessment included a 2024 desktop review of federal wetland maps (United States Fish and Wildlife Service 2024a) and aerial imagery, supplemented by site visits conducted between 2021 and 2025. These investigations confirmed that no surface waters or wetlands exist within the Study Area.

The Build Alternative is in the South Coast hydrologic region (California Interagency Watershed Mapping Committee 2023), the Los Angeles River Watershed, and partially within the Rio Hondo Watershed (**Figure 3.10-1**) (United States Geological Survey 2019). The nearest surface water feature is the Rio Hondo, approximately 1,600 feet east of the Build Alternative (**Figure 3.10-2**). This reach of the Rio Hondo (Reach 2) is concrete-lined, and high flows are directed to the adjacent spreading grounds (Baack 2022). It is surrounded by highly urbanized, impervious surfaces (e.g., pavement), resulting in runoff that has the potential to transfer pollutants, such as oil and grease into the river. Reach 2 is impaired for cyanide and coliform bacteria according to State Water Resources Control Board's 303(d) list of impaired water bodies. The Los Angeles Regional Water Quality Control Board's 2014 Basin Plan provides water quality objectives to address these impairments and protect beneficial uses.

The Rio Hondo Spreading Grounds east of the Rio Hondo hold water and allow for groundwater infiltration into the Central Subbasin, which underlies the Project, and is used for potable water. Groundwater depths vary throughout the region. The historic high groundwater levels in the Study Area ranged from 120 to 150 feet below ground surface on the northwest at Atlantic Boulevard and 5 to 15 feet below ground surface at the Rio Hondo and San Gabriel River (Diaz-Yourman and Associates 2021).

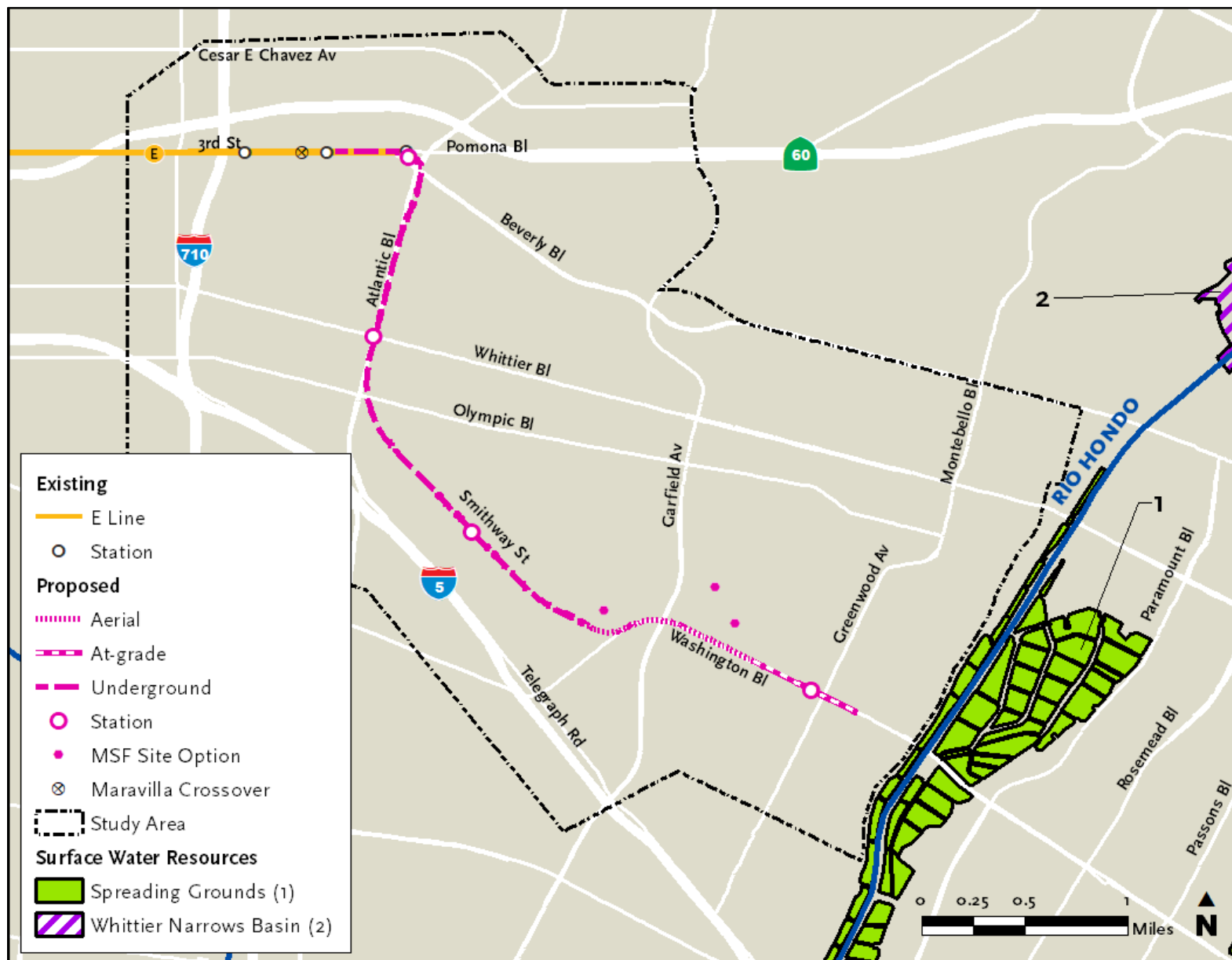
Watershed and Surface Water Context

- **Project Location:** South Coast hydrologic region, traversing the Los Angeles River and Rio Hondo watersheds
- **Water Resources:** The closest surface water is Reach 2 of the Rio Hondo and its spreading grounds. Spreading grounds hold water and allow for groundwater infiltration.
- **Water Quality Risks:** Extensive urban impervious surfaces that increases the risk of oil and grease runoff into the Rio Hondo



Source: United States Geological Survey 2019; Metro and CDM Smith/AECOM JV 2026.

Figure 3.10-1 Watersheds in the Study Area



Source: United States Geological Survey 2019; Metro and CDM Smith/AECOM JV 2026.

Figure 3.10-2 Surface Water Resources near the Study Area

Most groundwater supply wells in or near the Study Area are near the Rio Hondo and its spreading grounds (Los Angeles County Department of Public Works 2024). Wells near the underground alignment are generally 140 to over 200 feet deep and at least 0.2 mile from the Build Alternative. One drinking water well near Woods Avenue between Eagle Street and 6th Avenue is about 200 feet west of the alignment and more than 200 feet deep (Los Angeles County Department of Public Works 2024) and another is approximately 150 feet north of the at-grade alignment (Geokinetics Inc 2025). There are no groundwater wells underlying the MSF site options. Additional information on municipal water supply and suppliers within the Study Area is provided in **Section 3.16** (Utilities).

The Water Replenishment District's monitoring for Water Year 2023-2024 found that groundwater quality in the District generally remains high (Water Replenishment District 2025). However, there are sites in the Study Area where groundwater contamination has been documented, as discussed in **Section 3.9** (Hazardous Materials), and **Appendix J** (Hazardous Materials Impacts Report). Further, groundwater within the Study Area could be contaminated from unknown sources, such as leaking underground storage tanks.

Because the Study Area is primarily covered by impervious surfaces, the majority of stormwater and surface water runoff is conveyed via local structural stormwater infrastructure and flood control measures to municipal storm drains. The majority of the at-grade and aerial segments are along major arterials with curb and gutter features and there are multiple storm drains and drainage features within the Study Area. Stormwater within the Study Area is transported downstream to the Rio Hondo through constructed at-grade and underground drainages (Los Angeles County Department of Public Works 2006).

According to Federal Emergency Management Agency Flood Insurance Rate Maps, the Build Alternative alignment and MSF Site 3 are within zone X, an area of minimal flood risk, and would not be susceptible to 100-year or 500-year flood events (**Figure 3.10-3**). Although MSF Sites 1 and 2 are shown to be within a 100-year flood zone (flood zone A), a Letter of Map Change revised this area to zone X, an area of minimal flood risk. Historically, this area was a landfill disposal pit that collected stormwater and flooded. The landfill was filled to street level in the 1980s and developed, and stormwater is now directed to the municipal stormwater management system; thus, the site no longer floods. See **Appendix J** for historical information on the closed landfill. Limited areas of floodplain occur within the Study Area north of the alignment (**Figure 3.10-3**).

Flood Zones Data Sources

- Federal Emergency Management Agency Flood Insurance Rate Maps panels were reviewed to determine the potential flood hazards associated with the Build Alternative: 06037C1641F, 06037C1645F, 06037C1663F, 06037C1810F, and 06037C1830F, all effective September 26, 2008 (Federal Emergency Management Agency 2024).
- Letter of Map Change (Case Number 05-09-A390V-060141), effective September 27, 2008.



Source: Federal Emergency Management Agency 2024;
Metro and CDM Smith/AECOM JV 2026.

Figure 3.10-3 Federal Emergency Management Agency Flood Zones in the Study Area

3.10.2 No Build Alternative

The No Build Alternative, as described in **Section 2.2** (No Build Alternative) of the EA, would include already planned and funded roadway and transit projects but would not provide a rail transit option for communities in eastern Los Angeles County. The No Build Alternative would not result in impacts on water resources or quality. The No Build Alternative would not substantively change existing conditions related to impervious surfaces, groundwater supplies or recharge areas, drainage, or erosion in the Study Area. The No Build Alternative would not affect floodplains or wetlands. Overall, as shown in **Table 3.10-1**, the No Build Alternative would not change or impact existing conditions of water resources, and would result in no long-term adverse effects on water resources.

Table 3.10-1 Water Impact Summary – No Build Alternative

Topic	Impact	Rationale
Water Resources or Quality	No Adverse Effect	Already planned transit and roadway projects would comply with federal, state, and local regulations protecting water quality, which would minimize impacts on water quality.
Groundwater supplies or recharge areas, drainage, erosion	No Adverse Effect	- The Study Area is urbanized and mostly covered by impervious surfaces. - Implementation of already planned transit and roadway projects could result in minor changes to impervious surfaces, such as the reduction or addition of landscaped areas in the right-of-way. However, because these changes would occur along existing roadways in developed areas, there would be no substantive changes to existing conditions.
Floodplains and wetlands	No Adverse Effect	- Limited areas of floodplain occur within the Study Area; wetlands do not occur in the Study Area. - Already planned transit and roadway projects would comply with federal, state, and local regulations protecting floodplains, and no substantial change in impervious surfaces would occur under the No Build Alternative.

Source: Metro; CDM Smith/AECOM JV 2026.

3.10.3 Build Alternative

3.10.3.1 Water Quality

The Build Alternative would terminate approximately 1,600 feet west of the Rio Hondo and its spreading grounds. Ground-disturbing activities have the potential to result in erosion that generates sediment that could be transferred into nearby surface waters through means such as stormwater runoff. Operation of the Build Alternative would not result in ground disturbance, and therefore there would be no change in erosion or sedimentation in the long-term.

Operation of the Build Alternative has the potential to increase pollutants typically associated with light rail transit projects (e.g., heavy metals, oil, and grease). Thus, there could be adverse effects on surface water quality if these pollutants are conveyed to the Rio Hondo via runoff. In compliance with National Pollutant Discharge Elimination System permits, including the Construction General Permit, Municipal Separate Storm Sewer Systems Permit, Industrial General Permit for the MSF, and local Low Impact Development ordinances, post-construction best management practices would be installed to reduce runoff and pollution from runoff. Examples of post-construction best management practices required by law and/or permit approvals, such as treatment of stormwater runoff using infiltration best management practices and development of a stormwater pollution prevention plan, are provided in NEPA Project Measure (NPM) HWQ- 1 (**Section 3.10.4**). Because of implementation of best management practices and compliance with standards, the Build Alternative would not have long-term adverse effects on surface water quality from runoff and release of pollutants.

There could be adverse effects on water quality from the accidental release of hazardous materials used in operational and maintenance activities (e.g., fuels, paints, solvents) that are conveyed in runoff from the guideway or MSF. As described in **Section 3.9** and **Appendix J**, the Build Alternative would comply with laws and regulations pertaining to use and control of hazardous materials, including hazardous materials inventory and emergency response planning, risk planning and accident prevention, employee hazard communication, public notification of potential exposure to specific chemicals, and storage and handling of hazardous materials. Thus, there would be no adverse effect on water quality from the accidental release of hazardous materials.

Adverse effects on groundwater quality could occur if stormwater polluted from the Build Alternative infiltrates into groundwater basins underlying the Study Area via limited pervious surfaces or within the spreading grounds where it is discharged. However, as described above, implementation of post-construction best management practices identified in NPM HWQ-1 would reduce stormwater and non-stormwater runoff from the Study Area following construction. Treatment of stormwater runoff using infiltration best management practices would reduce the risk that polluted water would percolate into groundwater basins underlying the Study Area. Thus, there would be no long-term adverse effects on groundwater quality from percolation of polluted surface water.

As identified in **Appendix O** (Transportation Impacts Report), operation of the Build Alternative would result in reduced VMT compared to the No Build Alternative. An overall reduction in VMT in the Study Area could decrease the primary pollutants associated with all types of transportation operations (Fang and Volker 2017) such as fuels, oil, and grease; particulates and heavy metals; and dirt (Nixon and Saphores 2007; Trumbull and Bae 2000). This would reduce the presence of these pollutants in runoff and have a long-term beneficial effect on surface water quality in the Study Area.

3.10.3.2 Groundwater Supplies and Recharge

As discussed in **Section 3.10.1**, the Build Alternative would not be within the Rio Hondo or its spreading grounds. Further, there are no groundwater wells underlying or near the Build Alternative, so there would be no impacts on groundwater wells. The at-grade and aerial alignment and MSF would be in areas that do not provide notable groundwater recharge because existing surfaces are primarily impervious. Operational activities would not change the amount of impervious surface within the Rio Hondo Spreading Grounds where most of the groundwater recharge occurs. Thus, the Build Alternative would not result in long-term adverse effects on groundwater supplies or recharge.

3.10.3.3 Drainage

There could be a negligible increase in the amount of impervious surface from operation of the Build Alternative because of removal of small areas of landscaping. This could adversely affect drainage by increasing the amount of runoff from impervious surfaces. However, because the increase in impervious surfaces would be small, it would not meaningfully change the rate or amount of stormwater runoff generated in the Study Area, nor impact the spreading grounds where the majority of infiltration occurs. Further, the Build Alternative would comply with post-construction measures in applicable National Pollutant Discharge Elimination System permits, low impact development standards, and local policies protecting water quality, as identified in NPM HWQ-1 (**Section 3.10.4**). Permanent additions of stormwater infrastructure would be operated in compliance with Los Angeles County Department of Power and Water and Metro drainage standards. Therefore, the Build Alternative would have no long-term adverse effect on drainage.

3.10.3.4 Floodplains and Wetlands

As discussed in **Section 3.10.1**, the Build Alternative, including the MSF site options, is entirely within an area of minimal flood risk. The Build Alternative would have no effect on the small areas of floodplain located north of the alignment within the Study Area. Therefore, no further compliance with Executive Order 11988 and Department of Transportation Order 5650.2 would be required.

As discussed in **Section 3.10.1**, no wetlands occur within the Study Area. Therefore, the Build Alternative would have no effect on wetlands and no further compliance with Executive Order 11990 and Department of Transportation Order 5660.1A would be required.

3.10.4 Avoidance, Minimization, and Mitigation Measures for the Build Alternative

The measures identified in **Table 3.10-2** would be implemented for the Build Alternative in the long term. Construction measures are provided in **Section 3.17**.

Table 3.10-2 Long-Term Avoidance, Minimization, and Mitigation Measures

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
Water Quality	Generation of pollutants from light rail operations could be transferred into surface and groundwater via runoff and percolation, and from accidental release of hazardous materials	NPM HWQ-1 (Operational Best Management Practices for Water Resources). Operational best management practices (BMP) may include but shall not be limited to: ▪ Treatment of stormwater runoff using infiltration BMPs such as detention basins or tanks, infiltration basins, bioretention facilities, media filters, porous pavement, or vegetated filter strips to remove particulate pollutants. ○ Development of a stormwater pollution prevention plan (SWPPP) in compliance with the State Water Resources Control Board (SWRCB) Industrial General Permit for maintenance and storage facility (MSF) operations. The SWPPP shall include BMPs such as: Preventing disposal of any rinse/wash waters or industrial materials into the stormwater conveyance system. ○ Establishing procedures for prompt maintenance and repair of equipment that may result in leaks and spills.	Project Measure	No Adverse Effect - Operational best management practices and runoff and pollution control measures would be implemented to protect water quality
Groundwater Supplies and Recharge	No change to groundwater recharge areas or water wells	No avoidance, minimization, or mitigation measures needed	None	No Adverse Effect
Drainage	Negligible increase in impervious surface	NPM HWQ-1 (defined previously)	Project Measure	No Adverse Effect - Operational best management practices and runoff and pollution control measures would be implemented to control runoff
Floodplains and Wetlands	No effect as the Build Alternative is not within any floodplains or wetlands	No avoidance, minimization, or mitigation measures needed	None	No Effect

Source: CDM Smith/AECOM JV 2026.

3.11 Land Use and Development

This section evaluates the potential long-term effects of the No Build Alternative and the Build Alternative on land use and development. Short-term construction effects are discussed in **Section 3.17** (Construction).

The assessment of reasonably foreseeable effects in this section is based upon the temporal proximity parameters detailed in **Chapter 3.0** (Introduction) and the geographic proximity parameters detailed in the discussion of the land use and development Study Area in **Section 3.11.1** (Affected Environment).

3.11.1 Affected Environment

Land Use and Development Study Area

- **Alignment Buffer:** 0.25 mile radius along the Build Alternative Alignment
 - Focuses on immediate corridor impacts, access, and land-use compatibility
- **Station Buffer:** 0.5 mile around stations
 - Evaluates broader impacts such as transit-stimulated growth, pedestrian activity, and density shifts

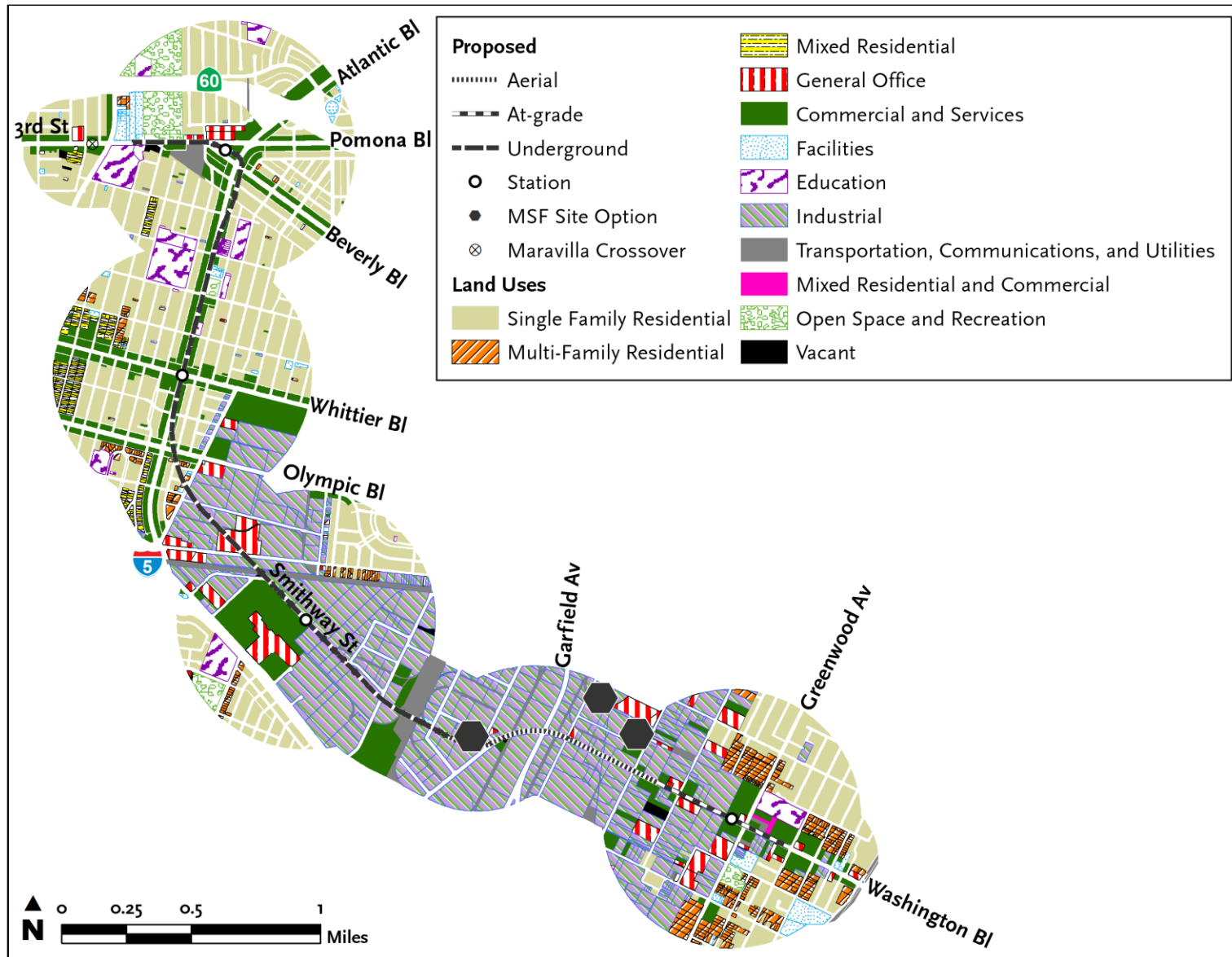
The detailed distribution of existing land uses and land use types are illustrated in **Figure 3.11-1** and summarized in **Table 3.11-1** and **Table 3.11-2**. Regulations related to land use and development applicable to the Project are summarized in **Appendix S** (Regulatory Setting Summary). Data sources used in this analysis include aerial imagery, zoning and other land use regulations, zoning maps, and field observations.

Table 3.11-1 Land Use Distribution within 0.25 Mile of the Build Alternative Alignment

Land Use	Acreage	Percent (%) of Total Area
Single Family Residential	307.8	21.6%
Multi-Family Residential	106.3	7.5%
Mixed Residential	9.1	0.6%
General Office	73.5	5.2%
Commercial and Services	199.2	14%
Facilities	23.5	1.6%
Education	49.5	3.5%
Industrial	550.1	38.6%
Transportation, Communications, and Utilities	56.6	4%
Mixed Residential and Commercial	1.4	0.1%
Open Space and Recreation	23.7	1.7%
Vacant	20.9	1.5%
Water	3.3	0.2%
Unknown	1.5	0.1%

Source: Southern California Association of Governments 2024b.

Key %= percent



Source: Southern California Association of Governments 2024.

Figure 3.11-1 Existing Land Uses within 0.25 Mile of the Build Alternative and 0.5 Mile of the Proposed Stations

Table 3.11-2 Land Use Distribution within 0.5 Mile of the Build Alternative Stations

Land Use	Atlantic/ Pomona (Acres)	Atlantic/ Pomona (Percent)	Atlantic/ Whittier (Acres)	Atlantic/ Whittier (Percent)	Commerce/ Citadel (Acres)	Commerce/ Citadel (Percent)	Greenwood (Acres)	Greenwood (Percent)
Single Family Residential	179.6	54.0%	182.9	48.5%	66.1	15.5%	101.0	18.8%
Multi-Family Residential	1.3	0.4%	9.7	2.6%	7.3	1.7%	175.2	32.6%
Mixed Residential	2.9	0.9%	22.2	5.9%	0.0	0.0%	0.0	0.0%
General Office	5.4	1.6%	4.7	1.2%	29.1	6.8%	27.8	5.2%
Commercial and Services	49.0	14.7%	89.6	23.8%	46.1	10.8%	49.2	9.1%
Facilities	13.7	4.1%	3.5	0.9%	0.7	0.2%	12.6	2.3%
Education	38.0	11.4%	20.8	5.5%	9.8	2.3%	8.8	1.6%
Industrial	0.5	0.1%	40.9	10.9%	240.8	56.5%	151.0	28.1%
Transportation, Communications, Utilities	6.9	2.1%	0.1	0.0%	18.5	4.3%	3.2	0.6%
Mixed Residential and Commercial	0.0	0.0%	0.0	0.0%	0.0	0.0%	1.4	0.3%
Open Space and Recreation	32.1	9.7%	2.0	0.5%	6.3	1.5%	3.8	0.7%
Agriculture	0.0	0.0%	0.0	0.0%	0.0	0.0%	0.2	0.0%
Vacant	2.9	0.9%	0.5	0.1%	1.7	0.4%	2.5	0.5%
Unknown	0.2	0.1%	0.0	0.0%	0.0	0.0%	1.3	0.2%

Source: Southern California Association of Governments 2024b.

Note: Percentages are rounded to the nearest tenth, and therefore may not total exactly 100 percent.

Key % = percent

Land use impacts are evaluated by weighing the context (i.e., geographic, biophysical, and social setting) and intensity (i.e., severity of beneficial or adverse effects) of potential land use incompatibilities and the Project's consistency with applicable regional and local plans and policies. Long-term effects include property acquisition, permanent right-of-way encroachments, and permanent access disruptions affecting adjacent land uses such as residences and businesses.

- Property acquisition: Land or building displacement
- Permanent right-of-way encroachment: The occupation of a right-of-way by structures, utilities, or other installations that limits its intended functionality
- Permanent access disruption: The alteration or obstruction of access routes that affect the movement of people and goods

3.11.2 No Build Alternative

The No Build Alternative, as described in **Section 2.2** (No Build Alternative) of the EA, would include already planned and funded roadway and transit projects but would not provide a rail transit option for communities in eastern Los Angeles County. The No Build Alternative would not include new construction, major service improvements, or new transportation infrastructure beyond projects identified in adopted regional plans, and development patterns would generally continue with existing trends. However, the No Build Alternative would not provide the land use benefits associated with high-capacity transit and the associated potential for transit-oriented development, such as support for transit oriented development, mixed-use development, or a more walkable urban form.

Although some roadway and transit improvements would occur, regional plans indicate that congestion and mobility conditions would continue to worsen without additional transportation capacity. Access and mobility in eastern Los Angeles County would likely deteriorate, and opportunities for transit supportive and pedestrian-oriented development would remain limited. Overall, as shown in **Table 3.11-3**, the No Build Alternative would not support regional or local plans, policies, and regulations intended to improve circulation, enhance community access, or reduce air pollutant emissions and would result in a long-term adverse land use effect.

Table 3.11-3 Land Use Impact Summary – No Build Alternative

Topic	Impact	Rationale
Consistency with Land Use Plans	Adverse Effect	■ Continuation of existing development trends with limited support for transit oriented or mixed-use development ■ Inconsistent with regional or local land use plans promoting compact, transit oriented communities or reduction in air pollutant emissions
Land Use Compatibility	Adverse Effect	■ Worsening congestion and limited improvements to access and regional connectivity ■ Inconsistent with plans seeking improved mobility and integration with the regional transit network

Source: Metro; CDM Smith/AECOM JV 2026.

3.11.3 Build Alternative

The Build Alternative would traverse portions of East Los Angeles (unincorporated Los Angeles County), Montebello, and Commerce. As detailed in **Table 3.11-4**, the Build Alternative would be consistent with all applicable land use plans by improving regional and local transit connectivity and supporting adopted regional, county, and city goals for transit-oriented development, improved mobility, and coordinated land use and transportation planning. Therefore, the Build Alternative would not result in an adverse effect on land use in the long term.

Table 3.11-4 Consistency with Land Use Plans

Organization	Plan(s)	Rationale	Consistent with Plan(s)?
Southern California Association of Governments	2024 Regional Transportation Plan (RTP)	The Build Alternative extends the existing Metro E Line to connect communities in east Los Angeles County with the regional transit network, improving mobility within the Study Area and supporting growth by expanding transit options. As a designated transportation network improvement in the 2024 RTP, the Build Alternative advances regional goals related to mobility, economic development, air quality improvement, and access.	Yes
Los Angeles County Metropolitan Transportation Authority	- Joint Development (2025) - Long Range Transportation Plan (2020) - Short Range Transportation Plan (2025) - Active Transportation Strategic Plan (2023) - Complete Streets Policy (2014) - Transit Oriented Communities Policy (2018) - Transit Oriented Communities Implementation Plan (2020) - First/Last Mile Guidelines (2021)	Metro's plans and policies promote expanded transportation access and increased rail service. The Build Alternative would support these goals and policies by improving rail service, enhancing connectivity with the existing and planned light rail system. Additionally, the Build Alternative is identified as a future transit improvement in Metro's 2020 LRTP.	Yes
Los Angeles County	- General Plan 2035 (2015-2022) - Metro Area Plan (2024)	The General Plan 2035 emphasizes coordinating land use with existing and planned transportation networks and developing a transportation system responsive to local and regional needs. The Build Alternative would connect residents, businesses, and transit dependent populations to the Metro transit system, supporting increased transit ridership and associated environmental benefits. Consistent with Land Use Policy 4.3, the Build Alternative would support transit oriented development opportunities along the corridor and within station areas. The Metro Area Plan prioritizes improved transportation options and mixed-use development through public/private partnerships. By extending accessibility and connectivity to the east and south, the Build Alternative would support economic growth, attract investment, and advance the Plan's vision for a well-connected and vibrant community.	Yes

Organization	Plan(s)	Rationale	Consistent with Plan(s)?
City of Commerce	Commerce 2020 General Plan (2008)	The Commerce 2020 General Plan emphasizes expansion of a safe and efficient regional transit system and coordination with regional transportation agencies. The Build Alternative would support these objectives by expanding mass transit service, improving connections to the regional transit network, and supporting station area development that aligns with local general plans. By increasing transit availability, the Build Alternative would also help reduce roadway congestion and associated air pollution. The Build Alternative is designed to balance regional transportation benefits with consideration of local community conditions. Project benefits and potential impacts would be shared along the alignment, rather than concentrated in a single area, and the project would not introduce facilities that disproportionately burden the local community. Potential effects on surrounding neighborhoods have been identified and evaluated, and measures would be implemented to avoid, minimize, or mitigate adverse impacts where feasible.	Yes
City of Montebello	Montebello General Plan update (2024)	The Build Alternative is consistent with the Montebello General Plan, including Policy P3.6 to preserve the City's industrial district, and retain and expand existing businesses by supporting alternative and public transportation and accommodating future transit-related growth while preserving and enhancing the industrial district.	Yes
City of Montebello	Bicycle Master Plan (2024)	The Montebello Bicycle Master Plan supports improved bicycle access and coordination with Metro, including first-/last-mile connections to transit. The Build Alternative would provide bicycle connections at stations consistent with Metro First/Last Mile Guidelines and Metro Rail Design Criteria and would not permanently affect bicycle access within the City of Montebello.	Yes

Source: Metro; CDM Smith/AECOM JV 2026.

The Build Alternative would operate primarily within existing transportation rights-of-way or underground. Project infrastructure, including trackway and stations, would be compatible with other uses and infrastructure within the existing rights-of-way and would not conflict with the surrounding land uses or alter existing zoning. Property acquisitions would include commercial and industrial uses; no residences, schools, churches, parks, or other sensitive receptors would be displaced. Relocation assistance and benefits would be provided per legal requirements and Metro policies, as discussed in **Section 3.12** (Acquisitions and Relocations).

The trench would be located within the established right-of-way and the underground segment would be fully underground, avoiding physical disruption to nearby land uses. Aerial guideway supports would be located either within rights-of-way or along limited property easements in an industrial zone. The aerial segment would not alter the existing industrial uses or zoning, nor would it or interfere with pedestrian or vehicle crossings. At-grade segments would operate within the center of Washington Boulevard and would be compatible with adjacent uses, which are primarily commercial and light industrial. Pedestrian and vehicle safety would be maintained through implementation of NPM TRA-1, which includes implementation of best practice safety measures such as warning signage, guideway barriers, prohibition of uncontrolled left-turns, and Americans with Disabilities Act compliant crossings.

Some limited access modifications would occur near the MSF site options. MSF Site 1 would require permanent closure of Acco Street to through traffic and MSF Site 2 would require driveway modifications. Implementation of NPM TRA-3 would ensure continued property access and safe traffic circulation. For any MSF site option, the MSF would be in an industrial area and would not change existing land use designations or zoning. The MSF would be compatible with the surrounding industrial uses, and would not adversely affect existing pedestrian, bicycle, and vehicular access. Thus, the MSF would not result in a long-term adverse effect on land use.

All new Build Alternative components would be designed to integrate with surrounding land uses and minimize land use effects. Development of Metro-owned properties acquired for short-term construction activities may be used for long-term joint development or parking facilities in adherence with Metro's Joint Development and Transit Oriented Communities Policy, as set forth in NPM EFI-1, thereby supporting redevelopment with transit oriented development and reducing potential land use impacts. Thus, the Build Alternative would not result in a long-term adverse land use effect.

3.11.4 Avoidance, Minimization, and Mitigation Measures for the Build Alternative

The measures identified in **Table 3.11-5** would be implemented for the Build Alternative in the long term. Construction measures are provided in **Section 3.17**.

Table 3.11-5 Long-Term Avoidance, Minimization, and Mitigation Measures

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
Consistency with Land Use Plans	The Build Alternative would be consistent with applicable land use plans	No avoidance, minimization, or mitigation measures needed	None	No Adverse Effect
Land Use Compatibility	Potential effects on pedestrian and vehicle safety from operation	NPM TRA-1 (Operational Best Management Practices for Transportation). Operational best management practices (BMP) for the Project shall include the following: ▪ Sidewalks shall not be altered to the extent that pedestrian circulation would be impaired or in violation of Americans with Disabilities Act (ADA) standards. ▪ Additional enhancements to the existing signalized crosswalks, such as marked crosswalks and lighting, shall further improve pedestrian circulation and non-motorized access to transit stations. ▪ Metro shall coordinate with local jurisdictions to enhance walkability in the immediate vicinity of the proposed station areas. ▪ Operation of the Project shall not conflict with any identified local programs, plans, or policies for circulation elements in coordination with local jurisdictions. ▪ New traffic signals or modifications to existing traffic signals (e.g., signal phasing changes) to accommodate light rail movements, traffic circulation patterns at intersections, grade crossings, and to facilitate pedestrian access to/from stations (e.g., mid-block crossings at stations) shall be designed in accordance with the Metro Rail Design Criteria (MRDC) and standards. ▪ Bicycle circulation and access amenities shall be provided in the immediate station areas. Amenities may include bike parking and connections to existing nearby bike facilities within up to a 600-foot radius to improve bicycle-to-transit connections, and shall be determined during preliminary engineering. ▪ Proposed bicycle facilities that intersect the Project at applicable intersections shall remain accessible and allow bicyclists and pedestrians to cross at those intersections. ▪ Project operations shall not preclude vehicle or truck access along Washington Boulevard, and left-turn movements shall continue to be allowed to and from major cross-streets (e.g., Garfield Avenue, Greenwood Avenue) at signalized intersections.	Project Measure	No Adverse Effect - Operational best management practices related to transportation would be implemented

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
		- Stations and grade crossings shall be designed in accordance with the MRDC, including Fire/Life Safety Design Criteria, to ensure safety and minimize potential hazards at all locations. - The Project shall be operated per applicable State, Metro, and city design criteria and standards, including adherence to design codes and standards such as the Occupational Safety and Health Administration (OSHA), California Division of Occupational Safety and Health Administration (Cal/OSHA), California Public Utilities Commission (CPUC), California Manual of Uniform Traffic Control Devices (MUTCD), Metro safety and security programs and standards (i.e., MRDC and Metro Systemwide Station Design Standards Policy), and building standards to ensure emergency vehicle access and response times are maintained and at acceptable levels. - Best practice safety measures shall be implemented to minimize potential conflicts between vehicles and pedestrians. Measures may include mid-block crosswalks, signal-protected pedestrian movements, channelization, barriers high visibility curbs between the guideway and roadway to prohibit vehicles from driving onto the tracks, barriers to protect and route pedestrians, ADA-compliant curb ramps, and warning signs to provide for convenient and safe access to station platforms. - Uncontrolled mid-block vehicular crossings of tracks and mid-block left-turns shall not be permitted and shall be physically prohibited by a curb between the roadway and at-grade guideway with a fence between the two tracks in the center of the guideway whenever feasible. - Grade crossings shall include traffic signal coordination and upgrades in accordance with MRDC to avoid conflicts between light rail vehicles (LRV) traffic along Washington Boulevard. - Vehicular and pedestrian crossings across the at-grade segments of the alignment shall be limited to intersections controlled by traffic signals.		
Land Use Compatibility	Potential effects on property access and safe traffic circulation from operation of the MSF site options	NPM TRA-3 (Operational Best Management Practices for the Maintenance and Storage Facility Regarding Transportation). Operational best management practices (BMP) for the maintenance and storage facility (MSF) include the following: - Access shall be maintained to properties to the west of the vacated portion of Acco Street via Yates Avenue (for MSF Site 1). Access shall be maintained on Yates Avenue (for MSF Site 2). Access shall be maintained on Gayhart Street (for MSF Site 3). - Any roadway changes shall be designed according to applicable Metro Rail Design Criteria (MRDC), state, and local design criteria and standards where applicable, including fire code and Fire/Life Safety Design Criteria and standards, and shall provide adequate emergency access	Project Measure	No Adverse Effect - Operational transportation best management practices for the MSF would be implemented

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
Land Use Compatibility	Potential effects on land use from development of Metro-owned properties	NPM EFI-1 (Metro Joint Development Program and Metro Pilot Local Hiring Initiative). Project measures to address fiscal and economic impacts include the following: ▪ Upon completion of construction, property needed for construction but not required to maintain the physical infrastructure or necessary for access shall be evaluated for inclusion in the Metro Joint Development Program for possible income restricted housing development or other transit-supportive land use, or included in a report to Metro Real Estate Asset Management for Surplus Land Act (SLA) requirements before sale. Any subsequent development shall be environmentally cleared separately from this Project and would undergo its own community input process. ▪ Project work shall comply with the Metro Pilot Local Hiring Initiative (effective May 21, 2021), which requires contractors working on Metro construction projects to comply with certain targeted hiring requirements, including prioritizing local workers from Los Angeles County.	Project Measure	No Adverse Effect - Development of Metro-owned property would follow Metro's Joint Development and Transit Oriented Communities Policy, supporting redevelopment with transit oriented uses and reducing potential land use impacts

Source: Metro; CDM Smith/AECOM JV 2026.

3.12 Acquisitions and Relocations

This section evaluates the potential long-term effects of the No Build Alternative and the Build Alternative relative to acquisition and relocation, as detailed in **Appendix M** (Real Estate and Acquisitions Impacts Report). Short-term construction effects are discussed in **Section 3.17** (Construction).

The assessment of reasonably foreseeable effects in this section is based upon the temporal proximity parameters detailed in **Chapter 3.0** (Introduction), and the geographic proximity detailed in the text box presented in **Section 3.12.1** (Affected Environment).

3.12.1 Affected Environment

Acquisition and Relocation Study Areas

- **Displacement Study Area:** the privately held commercial, residential, and industrial properties affected by the proposed rail and railroad system facilities of the Build Alternative
 - Focuses on effects of potential property acquisitions and potential displacements associated with the Build Alternative
- **Replacement Study Area:** jurisdictions affected by the Build Alternative (i.e., unincorporated community of East Los Angeles and Cities of Commerce and Montebello) and other nearby cities that may provide replacement site options (i.e., the jurisdictions covering areas equivalent to up to a 5-mile buffer of the proposed rail centerline, including portions of the Cities of Bell, Bell Gardens, Cudahy, Downey, Los Angeles, Pico Rivera, Monterey Park, Vernon, Downey, Huntington Park, Maywood, South Gate, Whittier, Santa Fe Springs, South El Monte, Monterey Park, Rosemead, San Gabriel, and Alhambra)
 - Focuses on effects of potential business displacements
 - Provides a larger area of jurisdictions from which to inventory potential suitable replacement site options for displaced businesses

Regulations on acquisitions and relocations applicable to the Project are summarized in **Appendix S** (Regulatory Setting Summary) and detailed in **Appendix M**. A review of various commercial databases, Los Angeles County Assessor parcel information, aerial imagery, and official zoning maps was conducted for this evaluation.

3.12.1.1 Acquisitions and Easements

Acquisition is the process of acquiring real property and can consist of full property acquisitions (i.e., acquisition of an entire property) or partial property acquisitions (e.g., the permanent and/or temporary acquisition of a portion of the property rights or interests in a property). If a fee interest of a portion of the property is acquired, then Metro would become owner for that portion of the property. A partial fee interest acquisition would also be considered if the area required for the Build Alternative is not critical to the property's primary function as a residence or business, or if the remaining portion of the property could be reconfigured to continue serving its purpose without significant disruption to occupants. Any remnant property that is no longer needed for transit purposes would be prioritized for new Joint Development opportunities, aligning with Metro's Transit Oriented Communities Policy to support transit oriented community growth. This would ensure that surplus land contributes to housing, economic development, and enhanced transit accessibility.

A Permanent Easement is the right to use a specific area (all or part of the property) owned by another owner for a specific purpose. Permanent underground/subsurface easements would be required for tunneling for a subway and underground utilities. Permanent aerial easements will be used for the elevated transit line. Acquisition of an easement would be considered a partial property acquisition from a property owner.

3.12.1.2 Displacements and Replacements

A “displacement” occurs when a project acquires real property, or portion thereof, that is occupied by an owner or tenant(s). “Replacement” refers to the movement of affected businesses into suitable replacement sites. The Displacement Study Area and Replacement Study Area are described in the text box in **Section 3.12.1**. This analysis prioritized affected jurisdictions for identification of replacement sites. The search was expanded to identify other suitable replacement sites within nearby, surrounding jurisdictions. The search, which was performed by zip code, includes portions of the Cities of Bell, Bell Gardens, Cudahy, Downey, Los Angeles, Pico Rivera, and Monterey Park. In general, the associated zip codes covered an area equivalent to a 2.5-mile buffer of the centerline of the Build Alternative. An expanded search of zip codes extending to an area equivalent to a 5-mile buffer of the proposed rail centerline included portions of the Cities of Los Angeles, Vernon, Downey, Huntington Park, Maywood, South Gate, Whittier, Santa Fe Springs, South El Monte, Monterey Park, Rosemead, San Gabriel, and Alhambra.

A ‘displaced person’ means, generally, any person who permanently moves from the real property or moves his or her personal property from the real property as: (a) a direct result of a written notice of intent to acquire, rehabilitate, and/or demolish, the initiation of negotiations for, or the acquisition of, such real property in whole or in part; or (b) as a direct result of rehabilitation or demolition for a project; or (c) as a direct result of a written notice of intent to acquire, or the acquisition, rehabilitation or demolition of, in whole or in part, other real property on which the person conducts a business or farm operation, for a project (49 CFR Part 24).

3.12.1.3 Property Displacement Analysis

Property displacements are determined by evaluating the extent to which the Build Alternative would affect existing properties and identifying those properties where the current use would not be possible if the Build Alternative is constructed. To achieve this, design files showing the extent of proposed rail alignment and railroad system facilities were imported into a geographic information system along with parcel boundary data from the Los Angeles County Assessor. Design data was overlaid onto the parcel data layer to identify properties (and the portions of those properties) that would be required to accommodate the Build Alternative. In addition to parcel data, aerial imagery from a number of sources including Google and Environmental Systems Research Institute, Inc. were incorporated into the geographic information system and used to identify instances where a proposed facility may affect a building, driveway, parking lot, or other key features of a property that could affect its viability once the Build Alternative is completed. Based on the extent of the potential effect of the Build Alternative, potential displacements were identified.

Commercial databases, including CoStar Group Market Listings, Environmental Systems Research Institute, Inc. Business Analyst Points of Interest, and LoopNet, were consulted. Additionally, available Google Earth Pro Street View images along roadways adjacent to affected properties (with imagery dates of March, April, and May of 2025 [Google Earth Pro 2025]) were reviewed to verify and/or supplement potential business displacements identified from the commercial databases.

3.12.1.4 Parcel Analysis

To analyze parcels that may be affected by the Build Alternative, data was obtained with each distinct component of the alignment assigned to a separate data layer and overlaid on the Los Angeles County Assessor parcel geographic information system layer. The assessor parcel layer contained current ownership information, including Assessor Parcel Number, owner name, zoning, and property use type. A spatial intersection query in the geographic information system identified each parcel affected by the design footprint. Additional resources, including Google Earth Pro’s 3D and Street View features, assisted in determining the nature of the acquisition required from each affected parcel. Zoning and land use information from the cities in which the properties are located, supplemented by data from the Los Angeles County Assessor, was obtained for the impacted properties. Resources consulted to estimate the number of business units and the corresponding number of employees displaced include the CoStar Group Market Listings and Environmental Systems Research Institute,

Inc. Business Analyst Points of Interest. Business data sources were supplemented with information available on company websites and other online resources such as Google Maps and Google Earth Pro. Searches were performed using CoStar's LoopNet, and a resulting comparison between the number of potential replacement units and the displacements identified were presented.

Land uses in proximity of the Build Alternative encompass a range of use types typically found in mature urban and suburban communities. **Figure 3.11-1** in **Section 3.11** (Land Use and Development) of this EA illustrates the existing land uses within the Land Use and Development Study Area (i.e., a 0.25-mile buffer along the guideway alignment and 0.5-mile buffer around the stations). As identified in **Table 3.11-1**, the greatest percentages of land uses within 0.25-mile of the alignment are industrial (38.6 percent), single family residential (21.6 percent), and commercial and services land uses (14 percent). As identified in **Table 3.11-2**, residential uses represent the largest share of land use within 0.5 mile of the proposed stations with the exception of the Commerce/Citadel station, for which the largest share of land use is industrial (56.5 percent). The MSF site options are surrounded by industrial uses such as manufacturing, assembly, and warehouses.

As it relates to property acquisitions and potential displacements associated with the Build Alternative, the land uses immediately abutting the alignment associated with the Displacement Study Area are primarily commercial and industrial land uses, as discussed in **Section 3.11**.

3.12.2 No Build Alternative

The No Build Alternative, as described in **Section 2.2** (No Build Alternative) of the EA, would include already planned and funded roadway and transit projects but would not provide a rail transit option for communities in eastern Los Angeles County. The No Build Alternative would maintain existing transit service through the year 2050. As shown in **Table 3.12-1**, any acquisition and relocation under the No Build Alternative would comply with existing regulations and environmental review processes and would result in no long-term adverse effect.

Table 3.12-1 No Build Alternative Impact Summary

Topic	Impact	Rationale
Acquisition, Displacement, Replacement and Relocation	No Adverse Effect	- Planned regional transit and roadway projects would require environmental review processes and compliance with existing regulations. - Planned regional transit and roadway projects would primarily occur along existing rights-of-way. Where acquisition and relocation are unavoidable, the projects would follow the provisions of the Uniform Relocation Assistance and Real Estate Acquisition Management Plan.

Source: Metro; CDM Smith/AECOM JV 2026.

3.12.3 Build Alternative

The Build Alternative could affect existing properties within the East Los Angeles community in unincorporated Los Angeles County and the Cities of Commerce and Montebello, and would require partial or full property acquisitions and result in displacements. Property acquisitions may be phased over time depending on funding and construction phasing, methods, and schedule.

Table 3.12-2 identifies the sources and causes of property acquisitions and displacements that could occur as a result of the Build Alternative.

Table 3.12-2 Sources and Causes of Potential Property Acquisitions and Displacements

Source of Acquisition	Type of Acquisition	Cause of Property Acquisition and Displacement
Horizontal Alignment	Full/Partial	Insufficient existing right-of-way for construction and operation.
Bored tunnel, aerial guideway alignment, aerial yard lead track structure, utility relocation	Permanent Easement	Light rail transit travels off public right-of-way above private property and obtains an aerial easement; light rail transit travels off public right-of-way underground and obtains a subsurface easement for the light rail transit and underground utilities.
Station Entrances and Appendages	Full/Partial	Access, ventilation, and emergency egress for new rail line underground stations.
Station Area	Full/Partial	Area required for construction and operation of the underground stations.
Maintenance and Storage Facility	Full/Partial	Area required to perform maintenance activities, store light rail vehicles, and for rail access to the maintenance area.
Traction Power Substations Sites	Partial/Full	Area required for traction power substations sites.
Construction Activities/Construction Staging Sites	Full/Partial	Area required for staging materials equipment during construction period (including tunnel boring machine launch site); permanent uses include traction power substations sites and may be used for station parking, guideway structures or other permanent use. Temporary construction easements are discussed in Section 3.17 .

Source: CDM Smith/AECOM JV 2026, **Appendix M**.

3.12.3.1 Acquisitions

The Build Alternative would require property acquisition for some operational systems and facilities. Property acquisition would be primarily limited to properties currently zoned for commercial or industrial uses along the alignment. No homes, churches, schools, parks, or other sensitive land uses would be fully acquired. Partial acquisitions of the frontages of some commercial properties along Washington Boulevard in the City of Montebello could be required to accommodate the crossovers east of Greenwood station. **Table 3.12-3** summarizes the number of impacted Assessor's Parcel Numbers, organized by full and partial (permanent) property acquisitions, for the Build Alternative by jurisdiction.

Table 3.12-3 Potential Permanent Property Acquisitions for the Build Alternative by Jurisdiction

Jurisdiction	Impacted Assessor's Parcel Numbers	Full Acquisitions	Partial Acquisitions	Acquisition Area (square feet) ¹
East Los Angeles (Unincorporated Los Angeles County)	53	15	38	310,525
City of Commerce	46	9	37	824,767
City of Montebello	18	5	13	167,844
TOTAL	117	29	88	1,303,136

Source: CDM Smith/AECOM JV 2026, **Appendix M**.

Note:

¹ Square footage identified is approximate, estimated based on 15 percent engineering design plans.

As shown in **Table 3.12-4**, MSF Site 1 would result in seven potential acquisitions, five of which would be full property acquisitions and two would be partial property acquisitions, to accommodate the MSF and lead tracks.

Table 3.12-4 Potential Permanent Property Acquisitions for the MSF Site 1

Jurisdiction	Impacted Assessor's Parcel Numbers	Full Acquisitions	Partial Acquisitions	Acquisition Area (square feet) ¹
City of Montebello	7	5	2	1,168,140

Source: CDM Smith/AECOM JV 2026, **Appendix M**.

Note:

¹ Square footage identified is approximate, estimated based on 15 percent engineering design plans.

As shown in **Table 3.12-5**, MSF Site 2 would result in 17 potential acquisitions that include seven full property acquisitions and 10 partial property acquisitions.

Table 3.12-5 Potential Permanent Property Acquisitions for MSF Site 2

Jurisdiction	Impacted Assessor's Parcel Numbers	Full Acquisitions	Partial Acquisitions	Acquisition Area (square feet) ¹
City of Commerce	11	1	10	59,448
City of Montebello	6	6	0	1,232,023
TOTAL	17	7	10	1,291,471

Source: CDM Smith/AECOM JV 2026, **Appendix M**.

Note:

¹ Square footage identified is approximate, estimated based on 15 percent engineering design plans.

Operation of MSF Site 3 would not involve any additional property acquisition beyond what would be acquired for construction of the Build Alternative. MSF Site 3 would utilize the contiguous space created from five full industrial property acquisitions along Gayhart Street as a result of the Build Alternative's transition from tunnel to aerial tracks, construction staging, and the launch of the tunnel boring machine at this location.

3.12.3.2 Displacement

The Build Alternative would not result in any potential residential displacements. However, Metro would require permanent underground/subsurface easements for tunneling under 65 properties, with 10 of these being residential properties. Permanent subsurface easements would be accomplished through a one-time payment and recording of an easement deed, which would provide Metro with the right to permanently use the required area beneath these properties as a tunnel for the underground portion of the guideway.

Potential non-residential (e.g., business) displacements would be necessary to accommodate some of the required property acquisitions. A property's viability for use and access by the business and to the business during operation of MSF Sites 1 and 2 would remain, including with the continuation of roadway, bicycle, and sidewalk access to it from Yates Avenue per NEPA Project Measure (NPM) TRA-3 (refer to **Appendix O** [Transportation Impacts Report]). As shown in **Table 3.12-6**, the Build Alternative is anticipated to potentially displace approximately 64 businesses and approximately 637 employees.

Table 3.12-6 Potential Business and Employee Displacements for the Build Alternative by Jurisdiction

Jurisdiction	Commercial Retail	Automotive Services	Restaurants/ Food Services	Office	Industrial	Total	Estimated Employees Displaced
East Los Angeles	9	5	6	7	0	27	225
City of Commerce	0	0	0	1	8	9	272
City of Montebello	9	9	7	3	0	28	140
TOTAL	18	14	13	11	8	64	637

Source: CDM Smith/AECOM JV 2026.

3.12.3.3 Replacements and Relocations

The majority of the property acquisitions associated with the Build Alternative involve commercial retail businesses that are concentrated within strip malls/auto malls, which are typical of the commercial retail properties along the Build Alternative corridor in this part of Los Angeles County. A sufficient number of comparable replacement sites may not be available within the affected jurisdictions alone (i.e., within East Los Angeles [Unincorporated County of Los Angeles], City of Commerce, and City of Montebello) for the automotive and restaurant/food service business types. However, expanding the database search to other nearby jurisdictions (i.e., to additional zip codes within approximately 2.5 miles and 5 miles of the affected jurisdictions) shows that there may be a sufficient number of possible replacement sites that are available for the affected businesses. Thus, at the time of actual acquisition, it is anticipated that suitable replacement sites would be available within a reasonable distance from the affected properties.

Each business and residence displaced as a result of the Build Alternative would be given advance written notice and would be informed of their eligibility for relocation assistance and payments under the Uniform Relocation Assistance and Real Property Acquisition Policies Act. For relocated businesses, jobs would also be relocated. However, some permanent job losses may result from the Build Alternative as a result of relocation. To address potential permanent job loss, Metro would also coordinate with the appropriate jurisdictions regarding business relocations. Due to application of the requirements under the Uniform Relocation Assistance and Real Property Acquisition Policies Act, California Relocation Act, and other applicable policies, the Build Alternative would not result in long-term adverse effects associated with permanent acquisitions and displacements.

3.12.4 Avoidance, Minimization, and Mitigation Measures for the Build Alternative

The measures identified in **Table 3.12-7** would be implemented for operation of the Build Alternative. Construction measures are provided in **Section 3.17**.

Table 3.12-7 Long-Term Avoidance, Minimization, and Mitigation Measures

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
Acquisition, Displacement, Replacement and Relocation	Potential acquisition, displacement, replacement and relocation effects resulting from property acquisition for Build Alternative systems and facilities.	NPM TRA-3 (Operational Best Management Practices for the Maintenance and Storage Facility Regarding Transportation). Operational best management practices (BMP) for the maintenance and storage facility (MSF) include the following: - Access shall be maintained to properties to the west of the vacated portion of Acco Street via Yates Avenue (for MSF Site 1). Access shall be maintained on Yates Avenue (for MSF Site 2). Access shall be maintained on Gayhart Street (for MSF Site 3). - Any roadway changes shall be designed according to applicable Metro Rail Design Criteria (MRDC), state, and local design criteria and standards where applicable, including fire code and Fire/Life Safety Design Criteria and standards, and shall provide adequate emergency access.	None	No Adverse Effect Operational transportation best management practices would be implemented.

Source: CDM Smith/AECOM JV 2026.

3.13 Noise and Vibration

This section evaluates the potential long-term effects of the No Build Alternative and the Build Alternative on noise and vibration, as detailed in in **Appendix L** (Noise and Vibration Impacts Report). Short-term construction effects are discussed in **Section 3.17** (Construction).

The assessment of reasonably foreseeable effects in this section is based upon the geographic and temporal proximity parameters detailed in **Chapter 3.0** (Introduction).

3.13.1 Affected Environment

The Study Area for this analysis includes the area within a 0.5-mile to 2-mile radius from the guideway centerline described in **Section 3.1.1** (Study Area) with a focus on the sensitive receptors within 350 feet or less of the Build Alternative. Sensitive receptors within the Build Alternative's screening distance are predominantly residential, and also include institutional receptors, schools, a library and a park. The location of sensitive receptors is shown in **Attachment A** of **Appendix L**.

Noise and Vibration Screening Distances for Sensitive Receptors

- **Noise:** 350 feet unobstructed from the guideway centerline
- **Vibration:** 150 feet unobstructed from the guideway centerline
- **Source:** In accordance with the FTA Transit Noise and Vibration Impact Assessment Manual (FTA 2018) and based on typical LRT systems adjusted to reflect Study Area-specific conditions.

Figure 3.13-1 and **Table 3.13-1** identify noise monitoring locations for the Build Alternative, which were selected based on surrounding land uses (e.g., the Build Alternative's proximity to sensitive receptors) and the Build Alternative's potential noise profile. Located in an urban corridor of mixed residential, industrial and commercial land uses, the high ambient noise conditions, based on the noise monitoring results and identified in **Table 3.13-2**, reflect the proximity of residences to heavily-used transportation corridors.

Regulations related to noise and vibration applicable to the Project are summarized in **Appendix S** (Regulatory Setting Summary) and detailed in **Appendix L**.

Table 3.13-1 Baseline Noise Levels Measured along the Project Corridor (in A-weighted decibel)

Noise Monitoring Location Number ¹	Receptor Noise Measurement Location	Land Use Type	FTA Land Use Categories ²	24-Hour Day-Night Noise Level	Peak-Hour Equivalent Sound Level
M01	376 South Woods Avenue	Single-Family Residence	2	62	63
M02	5224 ½ Via Corona Street	Single-Family Residence	2	66	65
M03	743 Amalia Avenue	Single-Family Residence	2	58	59
M04	740 ½ Woods Avenue	Single-Family Residence	2	57	57
M05	668 South Atlantic Boulevard	School	3	— ³	63
M06	860 Washington Boulevard	Single-Family Residence	2	71	68

Source: CDM Smith/AECOM JV 2026, **Appendix L**.

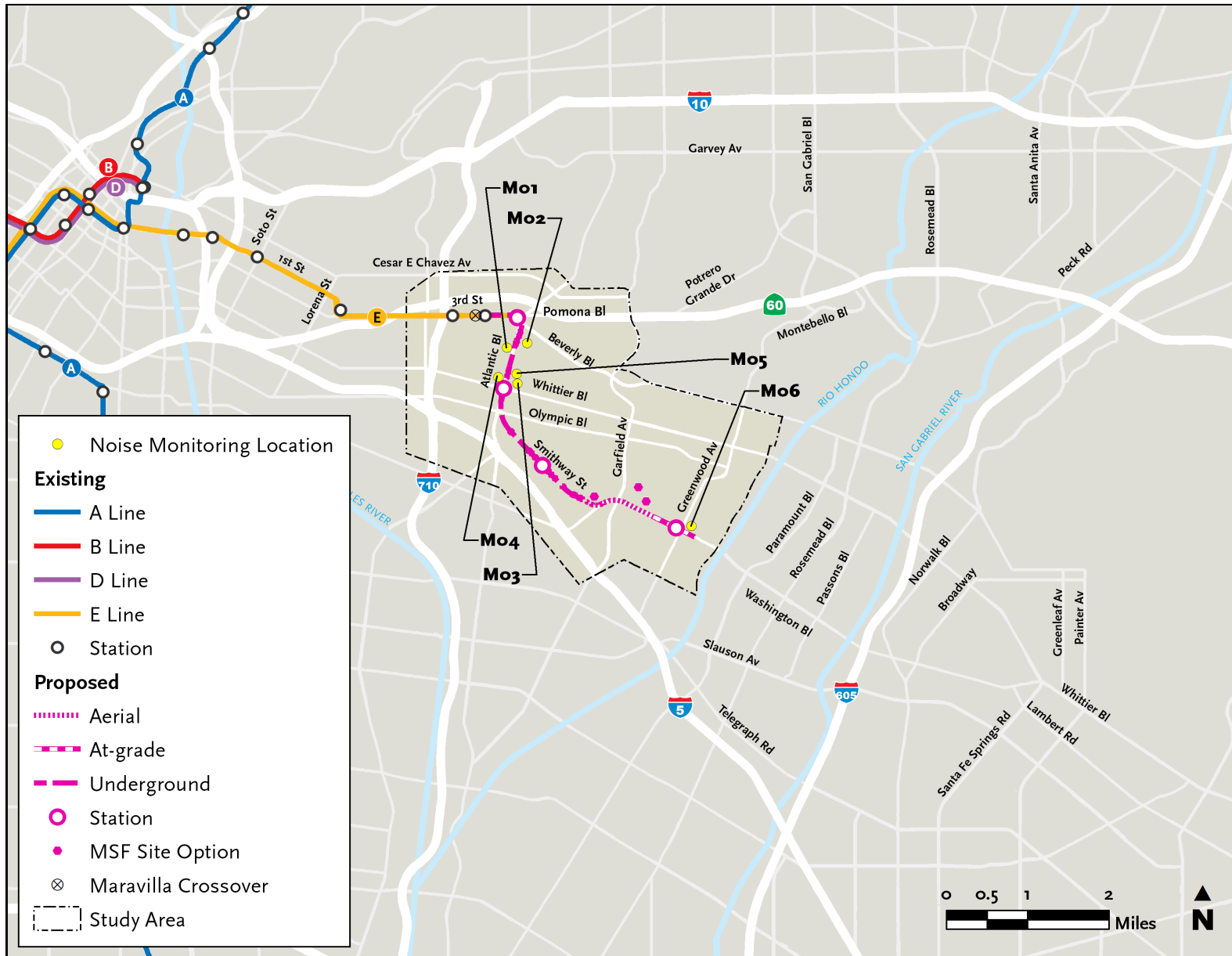
Notes:

¹ Refer to **Figure 3.13-1** and **Attachment A** in **Appendix L** for locations of representative noise measurements.

² FTA Land Use Categories: Category 1 - high sensitivity, Category 2 - residential, and Category 3 - institutional.

³ The day-night noise level is not applicable to institutional land uses.

Key: — = Not applicable



Source: CDM Smith/AECOM JV 2026.

Figure 3.13-1 Noise Monitoring Locations

3.13.2 No Build Alternative

The No Build Alternative, as described in **Section 2.2** (No Build Alternative) of the EA, would include already planned and funded roadway and transit projects but would not provide a rail transit option for communities in eastern Los Angeles County. Overall, as shown in **Table 3.13-2**, the No Build Alternative would not substantially change or impact existing noise or vibration levels and would result in no long-term adverse noise or vibration effect.

Table 3.13-2 Noise Impact Summary – No Build Alternative

Topic	Impact	Rationale
Noise and Vibration	No Adverse Effect	- Future noise and vibration levels under the No Build Alternative are anticipated to be similar to those under existing conditions. - Already planned regional transit and roadway projects would adhere to existing regulations to reduce noise effects

Source: Metro; CDM Smith/AECOM JV 2026.

3.13.3 Build Alternative

3.13.3.1 Long-Term Noise Effects

Reasonably foreseeable long-term noise effects of the Build Alternative are summarized in **Table 3.13-3** for the same representative receptor locations used to monitor current noise levels (see **Figure 3.13-1**) based on FTA criteria. The predicted corridor-wide noise effects are summarized in **Table 3.13-4**.

Noise along the Build Alternative would be primarily due to passbys¹³ from light rail transit vehicles for receptors near the aerial and at-grade guideway configurations and stationary noise sources (such as stations, the parking facility, the MSF, or special trackwork such as switches). Noise generated by passby of light rail transit vehicles would not exceed the FTA severe noise impact criteria at any sensitive receptors because of the distance of receptors from the alignment and/or intervening structures, high existing ambient noise levels near receptors, and because a portion of the alignment would be underground.

Noise from warning bells at Build Alternative at-grade crossings (proposed at Vail Avenue, Maple Avenue, and Greenwood Avenue) would be adjacent to manufacturing and commercial properties with high existing ambient noise levels, and therefore, there would be no adverse effects. Special trackwork (e.g., turnouts and crossovers) would not exceed the FTA severe noise impact criteria at any sensitive receptors because surrounding land uses are primarily industrial and commercial with high existing ambient noise levels, and there would be no adverse effect.

Traction power substations¹⁴ create noise with a continuous hum. As identified in NPM NOI-1 (Construction Noise Plan and Noise Monitoring Plan), each traction power substation would be at-grade and designed according with the Metro Rail Design Criteria noise guideline of 45 A-weighted decibel at 50 feet or at the setback line of the nearest building or occupied area, whichever is closer. The predicted operating noise level of the traction power substations would be much lower than existing ambient noise levels (which range from 57 A-weighted decibel, 24-hour day-night noise level to 68 A-weighted decibel, peak-hour equivalent sound level) and light rail transit passby noise levels of 78 A-weighted decibel at 50 feet. Therefore, noise from traction power substations would not exceed the FTA noise impact criteria at any receptors along the Build Alternative, and no adverse effect would occur.

¹³ A passby refers to the event of a transit vehicle (e.g., train, light rail vehicle, or bus) moving past a specific location.

¹⁴ Traction power substations are transformers that “step-up” the voltage necessary to operate the trains.

Table 3.13-3 Operational Noise Levels at Representative Receptors (in A-weighted decibel)

Receptor Identification Number ¹	Receptor Noise Measurement Location	Land Use Type	FTA Land Use Categories ²	Existing Noise	Build Noise ³	FTA Criteria Moderate ⁴	FTA Criteria Severe	Significant Impact? (Build noise greater than FTA “Severe Criteria”)
M01	376 South Woods Avenue	Single-Family Residence	2	62	— ⁵	59	65	No
M02	5224 ½ Via Corona Street	Single-Family Residence	2	66	— ⁵	62	68	No
M03	743 Amalia Avenue	Single-Family Residence	2	58	— ⁵	57	63	No
M04	740 ½ Woods Avenue	Single-Family Residence	2	57	— ⁵	57	63	No
M05	668 South Atlantic Blvd	School	3	63	— ⁵	65	71	No
M06	860 Washington Blvd	Single-Family Residence	2	71	66	<u>66</u>	71	No

Source: CDM Smith/AECOM JV 2026, **Appendix L**.

Notes:

¹ See **Attachment A** in **Appendix L** for receptor locations.

² FTA Land Use Categories: Category 1—high sensitivity, Category 2—residential, and Category 3—institutional.

³ The “Build Noise” levels represent the future Project noise only. The cumulative future ambient noise with the Project would be equal to the “Existing Noise” logarithmically added to the “Build Noise.”

⁴ FTA moderate impacts are **bold** and underlined.

⁵ These are not applicable because during operations, the alignment at this receptor would be located underground in a tunnel.

Key: — = Not applicable

Table 3.13-4 Corridor-Wide Project Noise Effects

Nearest Identification Number ¹	Location	Land Use Type	Impact (Moderate or Severe)	No. Residences Affected	Major Source(s) Contributing to Impact
M06	860 Washington Boulevard	Single-Family Residence	Moderate	1	Light Rail Transit Passbys
—	—	FTA Category 2	Severe	0	—
—	—	FTA Category 2	Moderate	1	—
—	—	FTA Category 2	Total	1	—

Source: CDM Smith/AECOM JV 2026, **Appendix L**.

Note:

¹ See **Attachment A** in **Appendix L** for receptor locations.

Key: — = Not applicable

One noise-sensitive historic property used as a residence, the Kelly House, is approximately 80 feet away from the crossover east of Greenwood station. There are high levels of existing noise from Washington Boulevard at this location (see Location M06 in **Table 3.13-1**). One historic property used as a school, the Greenwood Elementary School, is also adjacent to the Build Alternative, although outside of the FTA screening distance

(refer to **Appendix L**, Table 4-1 for the FTA screening distance for noise assessments). As shown in **Table 3.13-5**, the Build Alternative noise effects at these locations are moderate and no adverse effects would occur.

Table 3.13-5 Summary of Noise Levels at Historic Properties along the Project Alignment (in A-weighted decibel)¹

Receptor Identification Number ²	Receptor Description	Type	FTA Land Use Categories ³	Existing Noise	Build Noise ⁴	FTA Criteria Moderate	FTA Criteria Severe
HP1	Kelly House	Historic	2	71	65	65	70
HP2	Greenwood Elementary School	Historic	3	68	56	68	73

Source: CDM Smith/AECOM JV 2026, **Appendix L**.

Notes:

¹ The day-night noise level noise level is reported.

² See **Attachment A** in **Appendix L** for receptor locations.

³ FTA Land Use Categories: Category 1 – high sensitivity, Category 2 – residential, and Category 3 – institutional.

⁴ The “Build Noise” levels represent the future Project noise only. The cumulative future ambient noise with the Project would be equal to the “Existing Noise” logarithmically added to the “Build Noise.”

The receptors located above the underground tunnel alignment would not be affected by noise. The Arts in Action Community Charter Elementary School and Greenwood Elementary School would have potential noise effects. Both schools are screened by existing structures and outside the FTA screening distance of 175 feet. Noise levels at both schools would not exceed the FTA severe noise impact criteria and no adverse effects would occur.

The Maravilla Crossover would be approximately 250 feet away from the Griffith STEAM Magnet Middle School grounds and would involve a minor shift of the existing track within the existing right-of-way. A train control house would be constructed on the south side of 3rd Street adjacent to existing traction power substations. The train control house would meet the same design noise criteria as the existing traction power substations. Noise levels at this school would not exceed the FTA severe noise impact criteria and no adverse effects would occur.

As summarized in **Table 3.13-6**, four non-residential receptors that would potentially be impacted by noise were identified along the Build Alternative. None of the Build Alternative noise levels at the park, schools, and library are predicted to exceed the FTA moderate or severe impact criteria along the Build Alternative alignment. No adverse effects would occur.

Table 3.13-6 Potential Sensitive Receptors along the Build Alternative Alignment (in A-weighted decibel)¹

Receptor ² Description	Land Use Type	FTA Land Use Categories ³	Existing Noise	Build Noise ⁴	FTA Criteria Moderate	FTA Criteria Severe
Chet Holifield Park	Park	3	68	45	68	73
Chet Holifield Library	Library	3	68	48	68	73
Greenwood Elementary School	School	3	68	56	68	73
Arts in Action	School	3	63	56	65	71

Source: CDM Smith/AECOM JV 2026, **Appendix L**.

Notes:

¹ Peak-hour Equivalent Sound Level noise levels are reported for all receptors.

² See **Attachment A** in **Appendix L** for receptor locations.

³ FTA Land Use Categories: Category 1 – high sensitivity, Category 2 – residential, and Category 3 – institutional.

⁴ The “Build Noise” levels represent the future Project noise only. The cumulative future ambient noise with the Project would be equal to the “Existing Noise” logarithmically added to the “Build Noise.”

MSF Site 1, 2, or 3 would be in an industrial area and would have no noise-sensitive receptors (such as residences, schools, churches, or parks) within the FTA screening distance of 650 feet with intervening buildings (refer to **Appendix L**, Table 4-1). Therefore, no long-term adverse effects would occur.

3.13.3.2 Long-Term Vibration Effects

Transit vibration levels were predicted at the same receptor locations as those used for the noise analysis. As shown in **Table 3.13-7**, except for representative Receptor M05 (KIPP Raices Academy and Esperanza College Prep School), all of the vibration levels at the representative receptor sites are predicted to be below the FTA frequent impact criteria.

Table 3.13-7 Potential Vibration Levels at Representative Receptors from the Build Alternative (in vibration decibel)

Receptor Identification Number ¹	Receptor Vibration Receptor Location	Land Use Type	FTA Land Use Categories ²	Build Vibration ³	FTA Criteria "Frequent"	FTA Criteria Adverse Effect?
M01	376 South Woods Avenue	Single-family Residence	2	52	72	No
M02	5224 ½ Via Corona Street	Single-family Residence	2	68	72	No
M03	743 Amalia Avenue	Single-family Residence	2	62	72	No
M04	740 ½ Woods Avenue	Single-family Residence	2	64	72	No
M05	KIPP Raices Academy, 668 South Atlantic Boulevard and Esperanza College Prep School, 414 South Atlantic Boulevard	School	3	<u>80</u>	75	Yes
M06	860 Washington Boulevard	Single-family Residence	2	66	72	No

Source: CDM Smith/AECOM JV 2026, **Appendix L**.

Notes:

¹ See **Attachment A** in **Appendix L** for receptor locations.

² FTA Land Use Categories: Category 1 – high sensitivity Category 2 – residential, and Category 3 – institutional

³ Exceedances of the FTA frequent criteria are **bold** and **underlined**.

As shown in **Table 3.13-8**, corridor-wide vibration levels are predicted to exceed the FTA frequent criterion of 72 vibration velocity levels at 56 residences. These effects are due to the proximity of residences to proposed switches and to the tunnel section of the alignment. Additionally, two vibration impacts exceeding the criteria of 75 vibration decibels are predicted at the FTA Category 3 receptors, KIPP Raices Academy at 668 Atlantic Boulevard and Esperanza College Prep School at 414 Atlantic Boulevard. The predicted Build Alternative vibration effects are shown in **Attachment A** in **Appendix L**. Mitigation measures, presented in **Section 3.13.4**, would be implemented to reduce adverse vibration effects. NMM NOI-11 (Operational Vibration Mitigation — Tunnel) would require the use of track support systems¹⁵ to reduce vibratory effects

Switches allow trains to move from one track to another. Noise from switches comes from a small gap in the central part of the switch.

When the steel LRT wheel hits this gap, train noise levels could increase in the vicinity of the switch.

¹⁵ Track support systems incorporate resilience, such as ballast mats, high resilience track fasteners, resiliently supported ties or floating track slabs. High resilience fasteners typically reduce vibration by 5 decibels, ballast mats by 10 decibels, and floating slab track bed by 15 decibels.

caused by steel wheels rolling over steel rails at rail joints during the pass by of light rail transit vehicles at residences, and NMM NOI-12 (Operational Vibration Mitigation) would reduce vibratory levels by reducing the width of gaps at joints when steel wheels roll over steel rails at rail joints.

Table 3.13-8 Corridor-wide Project Vibration and Ground-Borne Noise Effects Along the Build Alternative

FTA Category	Nearest Id. Number ¹	Location	Type Use	Impact (Frequent)	Number of Properties Affected	Major Source(s) Contributing to Effect ²
FTA Category 2	M01	376 South Woods Avenue	Single-Family Residence	Frequent	12	Crossover
FTA Category 2	M02	5224 ½ Via Corona Street	Single-Family Residence	Frequent	6	Crossover
FTA Category 2	M02	5224 ½ Via Corona Street	Multi-Family Residence	Frequent	3	Crossover
FTA Category 2	— ³	Area local to East Olympic Boulevard	Single-Family Residence	Frequent	28	Operations
FTA Category 2	— ³	Area local to East Olympic Boulevard	Multi-Family Residence	Frequent	7	Operations
Total FTA Category 2	—	—	—	Frequent	56	—
FTA Category 3	M05	KIPP Raices Academy, 668 South Atlantic Boulevard and Esperanza College Prep School, 414 South Atlantic Boulevard	School	Frequent	2	Operations
Total FTA Category 3	—	—	—	Frequent	2	—
Total – All Uses	—	—	—	Total	58	—

Source: CDM Smith/AECOM JV 2026, **Appendix L**.

Notes:

¹ See **Figure 3.13-1** and **Attachment A** in **Appendix L** for receptor locations.

² Major sources include light rail transit passbys, light rail transit warning bells, and switches or special trackwork. The MSF and traction power substations are not expected to be a major source of impacts in any noise-sensitive locations.

³ There are no ambient noise measurement locations close to these vibration-impacted properties.

Key: — = not applicable; Id. = identification

The crossover east of Greenwood station is approximately 80 feet from the William and Florence Kelly House (860 Washington Boulevard), a single-family residence and historic property. The Build Alternative would not impact this vibration sensitive historic property, given its distance from the alignment. Similarly, the Build Alternative would not impact the vibration sensitive historic property at the Greenwood Elementary School, given its distance from the alignment.

Maximum vibration levels at two institutional receptors (KIPP Raices Academy and Esperanza College Prep School) are predicted to reach 80 vibration decibels, exceeding the FTA frequent impact criteria as shown in **Table 3.13-9**. However, compliance with NMM NOI-11 and NMM NOI-12 would reduce adverse effects caused by steel wheels rolling over steel rails at rail joints during the passby of light rail transit vehicles at these sensitive receptors. Thus, with implementation of NMM NOI-11 and NMM NOI-12, there would be no adverse long-term vibration effects on institutional receptors.

Table 3.13-9 Summary of Project Vibration Levels at Parks, Schools, and Other Institutional Receptor Sites Along the Build Alternative (in vibration decibel)

Receptor Identification Number	Receptor Description	Type Land Use	FTA Land Use Categories ¹	Build Vibration ²	FTA Criteria "Frequent"	FTA Criteria Adverse Effect
M05	KIPP Raices Academy, 668 South Atlantic Boulevard and Esperanza College Prep School, 414 South Atlantic Boulevard	School	3	<u>80</u>	75	Yes

Source: CDM Smith/AECOM JV 2026, **Appendix L**.

Notes: Due to attenuation over large distances, the predicted vibration level is below detection level and well below the ambient background level. Therefore, it is not perceptible.

¹ FTA Land Use Categories: Category 1 – high sensitivity Category 2 – residential, and Category 3 – institutional.

² Exceedances of the FTA frequent criteria are **bold** and underlined.

MSF Sites 1, 2 and 3 are in a predominantly industrial area; there are no vibration-sensitive receptors (such as residences, schools, churches, or parks) located within the FTA screening distance of 150 feet. Therefore, vibration generated from slow-moving light rail transit vehicles over switches and other special trackwork at the MSF would not exceed the FTA vibration impact criteria at any of the closest receptors, and no long-term adverse vibration effects would occur.

3.13.4 Avoidance, Minimization, and Mitigation Measures for the Build Alternative

The measures identified in **Table 3.13-10** would be implemented for the Build Alternative in the long-term. Construction measures are provided in **Section 3.17**.

Table 3.13-10 Long-Term Avoidance, Minimization, and Mitigation Measures

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
Noise	Potential noise effects from traction power substations that create noise with a continuous hum	NPM NOI-1 (Operational Design Standards for Noise). Operational (post-Project) design standards for the Project may include but are not limited to: Design per Metro Rail Design Criteria (MRDC) to reduce operational noise of the traction power substations (TPSS) which would mandate the location of TPSS to be 45 A-weighted decibels (dBA) at 50 feet or at the setback line of the nearest building or occupied area, whichever is closer.	Project Measure	No Adverse Effect - Operational design standards for the Build Alternative would be implemented
Vibration	Potential vibration effects from the proximity of sensitive receptors to the proposed tunnel	NMM NOI-11 (Operational Vibration Mitigation — Tunnel). Within the tunnel, Metro shall reduce operational vibration impacts through the use of track support systems which incorporate resilience, such as ballast mats, high resilience track fasteners, resiliently supported ties or floating track slabs as necessary to be below Federal Transit Administration (FTA) criteria for frequent annoyance from operational vibration, with the decision to be made through final design. FTA criteria for frequent annoyance is an exceedance of 72 vibration decibels (VdB) at residential uses and 75 VdB at daytime institutional uses, including schools, for more than 70 events per day.	Mitigation Measure	No Adverse Effect - potential vibratory effects on sensitive receptors in proximity to the tunnel during operation of the Build Alternative would be reduced
Vibration	Potential vibration effects from the proximity of sensitive receptors to proposed switches	NMM NOI-12 (Operational Vibration Mitigation). Metro shall reduce vibration impacts where necessary to be below Federal Transit Administration (FTA) criteria for frequent annoyance due to gaps at switches by methods such as installing ballast mats or other resilient fixings under conventional switches to “decouple” the train vibration from the track supporting structure, or using a monoblock frog or other low vibration switches. FTA criteria for frequent annoyance from operational vibration is an exceedance of 72 vibration decibels (VdB) at residential uses and 75 VdB at daytime institutional uses including schools for more than 70 events per day.	Mitigation Measure	No Adverse Effect - potential vibratory effects on sensitive receptors in proximity to switches during operation of the Build Alternative would be reduced

Source: CDM Smith/AECOM JV 2026, **Appendix L**.

3.14 Safety and Security

This section evaluates the potential long-term effects of the No Build Alternative and the Build Alternative on safety and security. Short-term construction effects are discussed in **Section 3.17** (Construction).

The assessment of reasonably foreseeable effects in this section is based upon the temporal proximity parameters detailed in **Chapter 3.0** (Introduction), and the geographic proximity detailed in **Section 3.14.1** (Affected Environment).

3.14.1 Affected Environment

The Study Area is the 0.5-mile to 2-mile radius from the guideway centerline described in **Section 3.1.1**. This encompasses the area where area where fire and police station response times could be affected by the Project and where conditions with a moderate to high likelihood of criminal activity could occur or require additional public safety resources. The evaluation of safety hazards from light rail operations, including conflicts involving pedestrians, bicyclists, and motor vehicles interactions focuses on the portion of the Study Area within 100 feet of the Build Alternative.

Regulations for safety and security applicable to the Project are summarized in **Appendix S** (Regulatory Setting Summary). Data sources used for this analysis include Metro light rail safety data and systemwide safety practices, crime statistics from comparable Metro Rail station areas, and identification of fire and police facilities in the Study Area.

3.14.1.1 Public Service Providers and Facilities

Law enforcement service of Metro facilities is shared between the Los Angeles County Sheriff's Department, Los Angeles Police Department, Long Beach Police Department, and the Transit Services Bureau. On the Metro system, quality of life enforcement, such as responding to serious crimes, is the primary duty of these law enforcement agencies. Metro also established the Ambassador Pilot Program in fall of 2022; transit ambassadors provide visible presence and help ensure that passengers have a safe experience when commuting (Metro 2025a). At any given time, there are approximately 320 officers and deputies patrolling the Metro system over each 24-hour period (Haskell 2022). With the exception of the existing Metro E Line service in East Los Angeles that terminates at Atlantic Station, there is currently no rail transit service that requires law enforcement service in the Study Area.

Fire prevention, protection, and emergency medical services in the Study Area are provided by the Los Angeles County Fire Department in unincorporated Los Angeles County (East Los Angeles) and the City of Commerce. The City of Montebello has its own municipal fire department. Los Angeles County Sheriff's Department provides law enforcement, police services, and civil processes in the Study Area in unincorporated Los Angeles County (East Los Angeles) and the City of Commerce. The City of Montebello has its own municipal police department.

Table 3.14-1 and **Table 3.14-2** identify the fire stations and police and sheriff's departments, respectively, within the Study Area, and **Figure 3.14-1** shows their locations. Emergency medical services in the Study Area are provided by the local fire departments, hospitals, independent government agencies (i.e., public health agency), non-profit corporations, and commercial for-profit companies.

Table 3.14-1 Fire Stations in the Study Area

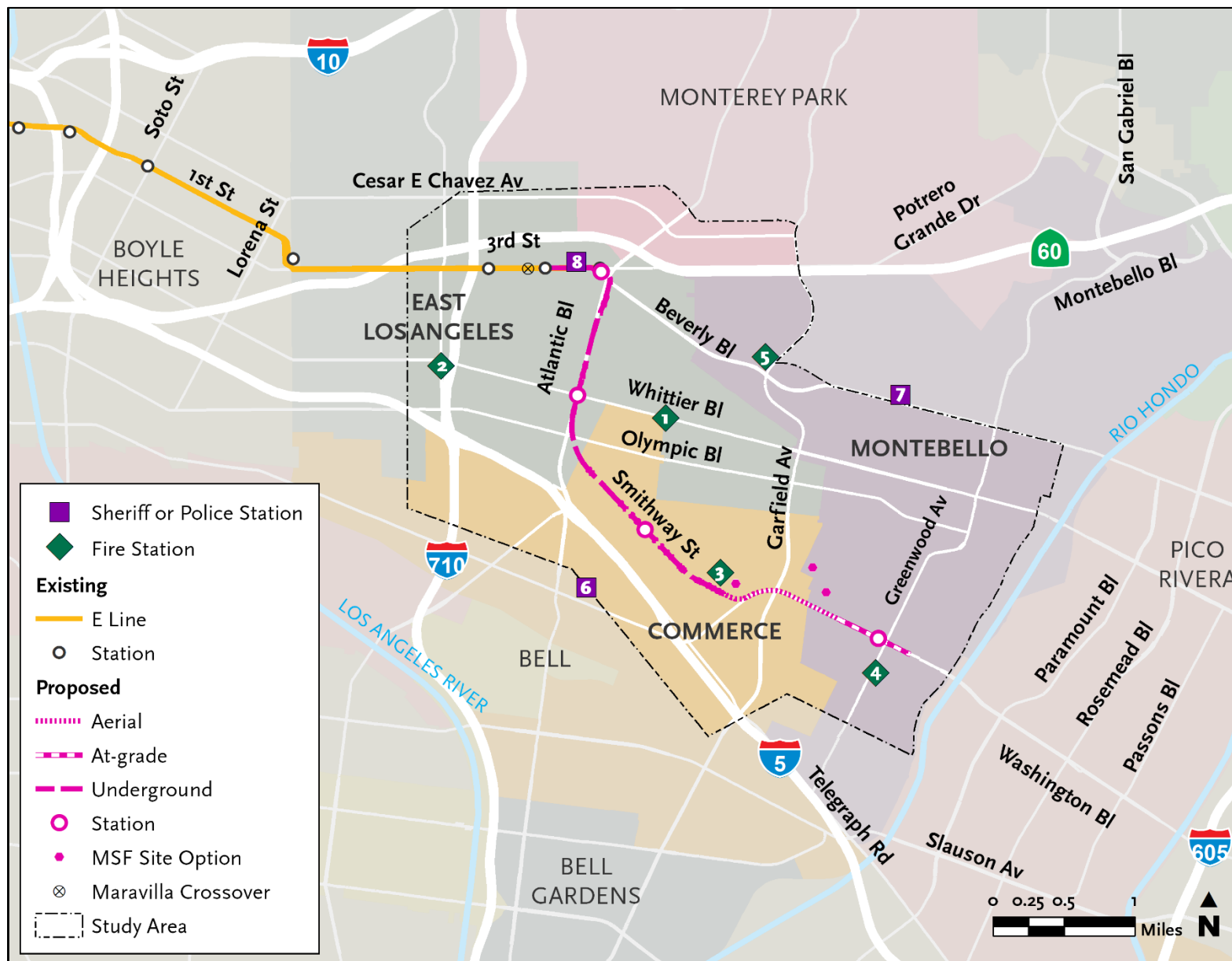
Map ID	Station Name	Address	Jurisdiction
1	Los Angeles County Fire Department - Station 22	928 Gerhart Avenue	Commerce
2	Los Angeles County Fire Department - Station 3	930 Eastern Avenue	Los Angeles
3	Los Angeles County Fire Department - Station 50	2327 Saybrook Avenue	Commerce
4	Montebello Fire Department - Station Number 2	1166 Greenwood Avenue	Montebello
5	Montebello Fire Department - Station Number 3	2950 Via Acosta	Montebello

Source: Los Angeles County 2024b.

Table 3.14-2 Police Stations in the Study Area

Map ID	Department	Address	Jurisdiction
6	Commerce Public Safety Division	2535 Commerce Way	Commerce
7	Montebello Police Department	1600 West Beverly Boulevard	Montebello
8	Los Angeles County Sheriff's Department East Los Angeles	5019 East 3rd Street	East Los Angeles

Source: Los Angeles County 2024b.



Source: CDM Smith/AECOM JV 2026.

Figure 3.14-1 Public Services Locations

As shown in **Table 3.14-3** and **Table 3.14-4**, Los Angeles County Sheriff's Department's data archives identify a total of 1,725 incidents were reported within 100 feet of the Build Alternative between 2019 and 2023 (Los Angeles County Sheriff's Department 2023).

Table 3.14-3 Part I Crimes reported to Los Angeles County Sheriff's Department within 100 feet of the Build Alternative, 2019-2023

Type	Reported Incidents	Percent ¹
Criminal Homicide	1	0.2%
Forcible Rape	1	0.2%
Robbery	72	9.4%
Aggravated Assault	93	12.2%
Burglary	66	8.6%
Larceny Theft	347	45.4%
Grand Theft Auto	175	22.9%
Arson	10	1.3%
Subtotal	765	100%

Source: Los Angeles County Sheriff's Department 2023.

Key: %=percent

Note:

¹ Totals may not add due to rounding.

Table 3.14-4 Los Angeles County Sheriff's Department Part II Crimes Reported to Los Angeles County Sheriff's Department within 100 feet of the Build Alternative, 2019-2023

Type	Reported Incidents	Percent ¹
Forgery	35	3.6%
Fraud and Non-Sufficient Funds Checks	47	4.9%
Sex Offense, Felony	41	4.3%
Sex Offense, Misdemeanor	9	0.9%
Non-aggravated Assault	118	12.3%
Weapon Laws	37	3.9%
Offense Against Family	14	1.5%
Narcotic	194	20.2%
Liquor Laws	23	2.4%
Drunk - Alcohol/Drug	13	1.4%
Disorderly Conduct	4	0.4%
Vagrancy/Quality of Life	4	0.4%
Gambling	0	0%
Drunk Driving - Vehicle/Boat	6	0.6%
Vehicle/Boating Laws	101	10.5%
Vandalism	144	15.0%
Warrant	31	3.2%
Receiving Stolen Property	2	0.2%
Federal Offense Without Money	0	0%

Type	Reported Incidents	Percent ¹
Federal Offense With Money	1	0.1%
Felony, Miscellaneous	56	5.8%
Misdemeanor, Miscellaneous	80	8.3%
Subtotal	960	100%

Source: Los Angeles County Sheriff's Department 2023.

Note:

¹ Totals may not add due to rounding.

Key: %=percent

According to the University of California Berkeley's Transportation Injury Mapping System data, 218 traffic crashes occurred within 100 feet of the Build Alternative from 2019 to 2023. As shown in **Table 3.14-5**, the most prevalent vehicle collision type resulted in injury and less than 1 percent involved a fatality. As shown in **Table 3.14-6**, the most common parties involved in collisions were vehicle-on-vehicle collisions (69 percent), followed by incidents involving pedestrians (14 percent). **Table 3.14-7** provides data on pedestrian actions prior to the collision.

Table 3.14-5 Number of Collisions by Severity within 100 feet of the Build Alternative, 2019-2023

Severity	Total Incidents	Percent ¹
Fatal	2	0.9%
Injury	216	99.1%
Total	218	100%

Source: University of California Berkeley 2024.

Note:

¹ Totals may not add due to rounding.

Key: %=percent

Table 3.14-6 Number of Collisions by Party Involved within 100 feet of the Build Alternative, 2019-2023

Party Involved	Incidents	Percent ¹
Pedestrian	32	14.2%
Bicycle	12	5.5%
Parked Motor Vehicle	6	2.8%
Train	3	1.3%
Fixed Object	6	2.8%
Not Stated	3	1.3%
Other Motor Vehicle	156	69.0%
Total	218	100%

Source: University of California Berkeley 2024.

Note:

¹ Totals may not add due to rounding.

Key: %=percent

Table 3.14-7 Pedestrian Action Prior to Collision within 100 feet of the Build Alternative, 2019-2023

Collision Type	Crossing Crosswalk (at intersection)	Crossing Crosswalk (not at intersection)	Crossing (no crosswalk)	Not In Road	In Road (including shoulder)	Approaching/ Leaving School Bus	Not Stated or Available
Pedestrian	17	0	5	4	5	0	1

Source: University of California Berkeley 2023.

3.14.2 No Build Alternative

The No Build Alternative, as described in **Section 2.2** (No Build Alternative) of the EA, would include already planned and funded roadway and transit projects but would not provide a rail transit option for communities in eastern Los Angeles County. Under the No Build Alternative, no new light rail transit facilities would be constructed within the Study Area, and existing conditions would generally remain unchanged. Public safety services and staffing levels would continue at current levels, and while future traffic congestion could affect access and response times, the No Build Alternative would not alter the demand for safety, security, or emergency response services. Existing law enforcement patrols and planned service levels would continue to be adequate to meet community needs. Overall, as shown in **Table 3.14-8**, the No Build Alternative would result in no long-term adverse effect on safety and security.

Table 3.14-8 Safety and Security Impact Summary – No Build Alternative

Topic	Impact	Rationale
Public safety, security, and emergency response service	No Adverse Effect	While access and response times could potentially be hampered by future traffic congestion, no additional security patrols beyond those currently being performed and planned to be performed in the future by law enforcement agencies would be necessary.

Source: Metro; CDM Smith/AECOM JV 2026.

3.14.3 Build Alternative

3.14.3.1 Rail Alignment and Traffic Safety

Regarding safety, the Build Alternative could introduce elements that may increase potential conflicts between pedestrians, bicyclists, motorists, and light rail vehicles. In particular, the at-grade alignment along Washington Boulevard may increase the potential for motorist safety hazards between light rail vehicles and traffic.

Under NPM TRA-1, uncontrolled mid-block vehicular crossings of tracks and mid-block left-turns would not be permitted and would be prevented by a physical barrier. This would include uncontrolled left turns from Washington Boulevard and uncontrolled left turns and through traffic from side streets and private driveways. Compliance with the Metro Rail Design Criteria, including Fire/Life Safety Criteria, as well as First/Last Mile Guidelines, would further minimize potential hazards at all locations and continue to provide unobstructed pedestrian and bicycle access, thereby reducing any safety risks that could lead to confusion or accidents. As standard practice, and as set forth in NPM SAF-1, Metro would implement educational outreach efforts in coordination with local schools, libraries, and community centers located near the Build Alternative. This would help enhance pedestrian safety and promote awareness of safe behaviors around light rail transit operations and infrastructure (e.g., at-grade rail crossings), especially among school-aged children. There would be no long-term adverse effect.

The trench along 3rd Street where the at-grade guideway would transition to the underground guideway would be located within the existing right-of-way and would include a physical barrier to prevent accidental entry; therefore, it would not introduce new conflicts or hazards for motorized or non-motorized users. The trench would eliminate pedestrian crossings and vehicle left turns at La Verne Avenue. However, pedestrian access would be facilitated by a new crosswalk that would be established east of La Verne Avenue. This crosswalk would not be signalized, but it would have a high-visibility design with bold markings and signage for increased visibility for motorists to improve safety. Left turns would also be eliminated at Civic Center Way, although pedestrian crossings at the signalized crosswalk would remain. There would be no long-term adverse effect.

3.14.3.2 Station and MSF Safety and Access

The new parking facility at Greenwood station could involve security concerns related to potential criminal activity. These potential safety-related adverse effects would be minimized with the best practice safety

measures as identified in NPM TRA-1, which are intended to minimize potential conflicts. In addition, as required by Metro Systemwide Station Design Standards Policy (Metro 2018b), the new parking facility would include adequate lighting and security cameras to permit live video surveillance and recording. Furthermore, Metro's security personnel, including Metro Transit Ambassadors, help to respond to or report safety and security issues as they occur. Metro Ambassadors provide visible presence and in-person support for Metro patrons and report maintenance and safety concerns to Metro and would help Metro respond to potential safety concerns related to the Build Alternative (Metro 2025a). Metro also partners with the Los Angeles County Department of Mental Health to maintain public safety and divert individuals in crisis to appropriate treatment (Metro 2022c). With Metro's existing security practices and implementation of NPM SAF-1 and NPM TRA-1, the Build Alternative would have no long-term adverse effects on safety.

The MSF and lead tracks connecting the MSF to the mainline would be designed so that existing businesses in the vicinity would continue to have safe access from the driveways and parking areas to adjacent roadways. MSF Site 1 would result in the elimination of through access on Acco Street; however, a cul-de-sac would be provided on the westerly side of the lead tracks to ensure that access to businesses, including emergency access, is maintained from Yates Avenue. The lead tracks for MSF Site 2 would be on Yates Avenue. The two-way traffic on Yates Avenue would be maintained, which would help to facilitate vehicular flow and reduce congestion, further enhancing safety for all users. For MSF Site 3, the at-grade yard lead tracks would be east of Saybrook Avenue and would not impact access to businesses or emergency access, including access for Fire Station 50, from either Gayhart Street or Saybrook Avenue. For all MSF site options, the MSF site design would include safety features such as barriers and security cameras to prevent unauthorized access to the rail yard, thereby reducing the potential for accidents. Therefore, the MSF would not have long-term adverse effects related to safety.

The Build Alternative would introduce elements such as support columns, trench guideway, and below-grade portions, that may attract activities such as graffiti. As standard operating practice, and as set forth in NPM SAF-1, Metro would supplement existing police protection services by providing Transit Services Bureau officers and contracted police services at all new light rail transit facilities, as needed, to ensure that adequate police protection services are provided. Additionally, Metro Ambassadors would provide visible presence and in-person support for Metro patrons and report maintenance and safety concerns to Metro. There would be no long-term adverse effect.

3.14.3.3 Emergency Preparedness and Public Safety Coordination

The All-Hazards Mitigation Plan for Los Angeles County, which also covers the City of Commerce, and the Local Hazard Mitigation Plan for the City of Montebello address procedures for large-scale emergency situations including terrorism-related risks. The Build Alternative would adhere to these regional and local emergency preparedness documents. In addition, the Build Alternative would align with best practices outlined in the FTA's Public Transportation System Security and Emergency Preparedness Planning Guide that provides detailed steps for conducting threat and vulnerability assessments. These best practices would include a response and evacuation plan and the identification of design and procedural countermeasures to improve crime prevention and lower the vulnerability of the Build Alternative to acceptable levels. The Build Alternative would adhere to FTA, regional, and local regulations that address large-scale emergencies including terrorism; therefore, there would be no long-term adverse effect.

The MSF would be subject to surveillance and security protocols from law enforcement and community vigilance typical of industrial areas. The MSF would include surveillance cameras, controlled access points, and adequate lighting that are common security features incorporated into maintenance facilities. Additionally, the presence of Metro security protocols, including surveillance and patrols consistent with other Metro facilities, would ensure that the area remains secure. As such, the MSF would not introduce conditions conducive to criminal activity or require additional security measures beyond standard Metro practices and, therefore, would have no long-term adverse effect.

The Build Alternative could include demand for fire and police protection services from potential incidents or emergencies at the new light rail transit stations, facilities, and grade crossings. As standard practice, and as identified in NPM TRA-1, Metro would coordinate with fire and police protection officials when designing grade crossings. Due to the existing at-grade configuration of the E Line, vehicles exiting the Sheriff's Department driveway currently can only turn right and must complete a U-turn at La Verne Avenue to travel east on 3rd Street. The proposed trench in 3rd Street for the underground guideway transition would eliminate left turns and U-turns at La Verne Avenue. Left turns would also be eliminated at Civic Center Way. A new access road would be constructed across 3rd Street to provide access to the Sheriff's Department's driveway. The new access road would include signage to restrict the use of the new access road to Sheriff's Department vehicles only. The access road would allow for safe left turns from the Sheriff's Department driveway onto 3rd Street, thus improving emergency access by providing Sheriff's Department vehicles access to eastbound 3rd Street. Similarly, eastbound Sheriff's Department vehicles on 3rd Street would be able to turn left directly into the Sheriff's Department driveway, which is not currently allowed. Thus, Sheriff Department vehicles would continue to have access in and out of their existing driveway for both directions.

In addition, as identified in NPM TRA-1, all new light rail transit facilities and crossings would be designed in accordance with the Metro Rail Design Criteria, including the Fire/Life Safety Criteria, to ensure safety and minimize potential hazards at all locations. As set forth in NPM TRA-1, operational best management practices would be implemented to minimize potential safety hazards. The underground and aerial configuration portions of the Build Alternative would not have any effect on fire and police protection response times since those segments would not affect emergency vehicles travelling on surface streets. Consequently, fire and police protection response times are anticipated to remain at acceptable levels and would not require new or physically altered fire or police protection facilities. With implementation of NPM TRA-1, NPM SAF-1, and compliance with Metro's Metro Rail Design Criteria, including the Fire/Life Safety Criteria, the Build Alternative would have no long-term adverse effect with respect to fire and police protection services.

MSF maintenance would be consistent with existing industrial operations and would not introduce any significant hazards that would necessitate additional emergency response resources or facilities. As previously described, the MSF site options would maintain access to surrounding businesses which would also ensure emergency access is maintained. As identified in NPM TRA-3, access into and around the MSF, including surrounding streets, shall be required to provide for adequate emergency access to the MSF and surrounding businesses. Thus, the Build Alternative would have no long-term adverse effect on safety and security.

3.14.4 Avoidance, Minimization, and Mitigation Measures for the Build Alternative

The measures identified in **Table 3.14-9** would be implemented for the Build Alternative in the long term. Construction measures are identified in **Section 3.17**.

Table 3.14-9 Long-Term Avoidance, Minimization, and Mitigation Measures

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
Safety	Potential safety hazards from at-grade rail crossings and uncontrolled mid-block vehicular movements	NPM SAF-1 (Fire and Police Best Management Practices). Operational best management practices (BMP) for the Project shall include the following: ▪ Metro shall supplement existing police protection services, consistent with current industry practices and Federal guidance, by deploying Transit Services Bureau (TSB) officers, contracted law enforcement personnel, and/or Metro Ambassadors at new light rail transit facilities, as needed, to proactively address safety concerns and support rider and staff security. ▪ Metro shall offer its existing Rail Safety Program to schools, libraries, and community centers located within proximity to new at-grade light rail transit facilities. The program includes: ○ In-person or virtual rail safety workshops, which may be conducted during school hours, after school, or at special events. ○ Distribution of educational rail safety materials and manuals during in-person workshops. ○ Optional rail safety orientation tours, upon request, to demonstrate safe interaction with at-grade rail crossings and station environments. ○ Online educational content tailored for Grades 1–5 and 6–12.	Project Measure	No Adverse Effect - Operational best management practices related to safety would be implemented
Safety	Potential effects on pedestrian and vehicle safety from operation	NPM TRA-1 (Operational Best Management Practices for Transportation). Operational best management practices (BMP) for the Project shall include the following: ▪ Sidewalks shall not be altered to the extent that pedestrian circulation would be impaired or in violation of Americans with Disabilities Act (ADA) standards. ▪ Additional enhancements to the existing signalized crosswalks, such as marked crosswalks and lighting, shall further improve pedestrian circulation and non-motorized access to transit stations. ▪ Metro shall coordinate with local jurisdictions to enhance walkability in the immediate vicinity of the proposed station areas. ▪ Operation of the Project shall not conflict with any identified local programs, plans, or policies for circulation elements in coordination with local jurisdictions. ▪ New traffic signals or modifications to existing traffic signals (e.g., signal phasing changes) to accommodate light rail movements, traffic circulation patterns at intersections, grade crossings, and to facilitate pedestrian access to/from stations (e.g., mid-block crossings at stations) shall be designed in accordance with the Metro Rail Design Criteria (MRDC) and standards.	Project Measure	No Adverse Effect - Operational best management practices related to transportation would be implemented

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
		▪ Bicycle circulation and access amenities shall be provided in the immediate station areas. Amenities may include bike parking and connections to existing nearby bike facilities within up to a 600-foot radius to improve bicycle-to-transit connections, and shall be determined during preliminary engineering. ▪ Proposed bicycle facilities that intersect the Project at applicable intersections shall remain accessible and allow bicyclists and pedestrians to cross at those intersections. ▪ Project operations shall not preclude vehicle or truck access along Washington Boulevard, and left-turn movements shall continue to be allowed to and from major cross-streets (e.g., Garfield Avenue, Greenwood Avenue) at signalized intersections. ▪ Stations and grade crossings shall be designed in accordance with the MRDC, including Fire/Life Safety Design Criteria, to ensure safety and minimize potential hazards at all locations. ▪ The Project shall be operated per applicable State, Metro, and city design criteria and standards, including adherence to design codes and standards such as the Occupational Safety and Health Administration (OSHA), California Division of Occupational Safety and Health Administration (Cal/OSHA), California Public Utilities Commission (CPUC), California Manual of Uniform Traffic Control Devices (MUTCD), and Metro safety and security programs and standards (i.e., MRDC and Metro Systemwide Station Design Standards Policy), and building standards to ensure emergency vehicle access and building standards ensure that response times are maintained and at acceptable levels. ▪ Best practice safety measures shall be implemented to minimize potential conflicts between vehicles and pedestrians. Measures may include mid-block crosswalks, signal-protected pedestrian movements, channelization, barriers high visibility curbs between the guideway and roadway to prohibit vehicles from driving onto the tracks, barriers to protect and route pedestrians, ADA-compliant curb ramps, and warning signs to provide for convenient and safe access to station platforms. ▪ Uncontrolled mid-block vehicular crossings of tracks and mid-block left-turns shall not be permitted and shall be physically prohibited by a curb between the roadway and at-grade guideway with a fence between the two tracks in the center of the guideway whenever feasible. ▪ Grade crossings shall include traffic signal coordination and upgrades in accordance with MRDC to avoid conflicts between light rail vehicles (LRV) traffic along Washington Boulevard. ▪ Vehicular and pedestrian crossings across the at-grade segments of the alignment shall be limited to intersections controlled by traffic signals.		

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
Security	Potential for increased vulnerability to crime at stations, parking facility, and MSF	NPM SAF-1 (defined previously)	Project Measure	No Adverse Effect - Operational best management practices related to safety would be implemented
Emergency Access	Potential effects on property access and safe traffic circulation from operation	NPM SAF-1 (defined previously) NPM TRA-1 (defined previously) NPM TRA-3 (Operational Best Management Practices for the Maintenance and Storage Facility Regarding Transportation). Operational best management practices (BMP) for the maintenance and storage facility (MSF) include the following: - Access shall be maintained to properties to the west of the vacated portion of Acco Street via Yates Avenue (for MSF Site 1). Access shall be maintained on Yates Avenue (for MSF Site 2). Access shall be maintained on Gayhart Street (for MSF Site 3). - Any roadway changes shall be designed according to applicable Metro Rail Design Criteria (MRDC), state, and local design criteria and standards where applicable, including fire code and Fire/Life Safety Design Criteria and standards, and shall provide adequate emergency access.	Project Measure	No Adverse Effect - Operational transportation best management practices for the MSF would be implemented

Source: CDM Smith/AECOM JV 2026.

3.15 Transportation

This section evaluates the potential long-term effects of the No Build Alternative and the Build Alternative on transportation, as detailed in **Appendix O** (Transportation Impacts Report). Short term construction effects are discussed in **Section 3.17** (Construction).

The assessment of reasonably foreseeable effects in this section is based upon the temporal proximity parameters detailed in **Chapter 3.0** (Introduction), and the geographic proximity parameters defined in **Section 3.15.1** (Affected Environment).

3.15.1 Affected Environment

The Study Area is the 0.5-mile to 2-mile radius from the guideway centerline described in **Section 3.1.1**. This Study Area encompasses the transit and transportation network, pedestrian and bicycle circulation and emergency access that could be affected by the Project. The evaluation of local transportation, parking, emergency access, and pedestrian and bicycle circulation near the proposed stations and MSF site options focuses on the portion of the Study Area within a 0.25 mile radius of the proposed stations and MSF site options.

Regulations for transportation applicable to the Project are summarized in **Appendix S** (Regulatory Setting Summary) and detailed in **Appendix O**. Data sources used for this analysis include the Corridor Based Model 2018 (CBM18), intersection traffic counts (January 2025), roadway segment vehicle counts (by vehicle class) (January 2025), Southern California Association of Government's 2016 RTP, Southern California Association of Government's 2024 RTP, ridership data from Metro, Metrolink, Caltrans, the City of Montebello, the City of Commerce, and Los Angeles County Public Works, and the Los Angeles County Bicycle Master Plan.

3.15.1.1 Methodology

Ridership forecasts, VMT estimates, and other travel demand modeling projections used in this analysis are based on the outputs of the CBM18. The base-year data in the CBM18 are from 2017 and represent the most recent available data when the model was created in 2018. The CBM18 was updated and refined specifically for use in this study to include major roadway and transit improvements expected to be completed by 2042. The travel demand modeling analysis includes Metro Measure M projects identified in the Measure M Expenditure Plan. The Metro Measure M projects are to be completed by the forecast year, as included in the CBM18. Similarly, any roadway improvement projects specified by jurisdictions are included in the travel demand modeling analysis. An analysis of mode shift resulting from the Build Alternative considered several key factors, including new transit riders, station access, travel times and delay, shifts from auto to rail, service levels, and VMT. See **Appendix O** for additional information.

The Transportation analysis evaluates the following topics:

- **Transit:** Transit services in the Study Area
 - Metro Rail E Line (Maravilla, East Los Angeles Civic Center, and Atlantic Stations)
 - Metrolink (Montebello/Commerce Station)
 - Metro and other jurisdictional bus lines
- **Transportation Network:** Regional freeway network and arterial network of major north/south and east/west roadways
- **Pedestrian Circulation:** Sidewalks, crosswalks, and other pedestrian facilities near the proposed stations and in the Study Area
- **Parking:** Off-street and on-street parking facilities near the proposed stations
 - Spillover parking during operations is analyzed for the surrounding areas around proposed stations

- **Bicycle Circulation:** Class I through Class IV bicycle facilities and bicycle parking near the proposed stations and in the Study Area
- **Emergency Access:** Emergency access facilities within the Study Area, including police stations, fire departments, and hospitals
 - o State Route 60 and Interstate 5 are identified as primary disaster routes
 - o Beverly Boulevard, Garfield Avenue, Washington Boulevard are identified as secondary disaster routes for the Los Angeles County Operational Area

3.15.2 No Build Alternative

The No Build Alternative, as described in **Section 2.2** (No Build Alternative) of the EA, would include already planned and funded roadway and transit projects but would not provide a rail transit option for communities in eastern Los Angeles County. The No Build Alternative would not involve any new construction, major service improvements or new transportation infrastructure beyond what is listed in Metro's 2020 LRTP, Southern California Association of Governments, 2024 RTP, and Measure M. The No Build Alternative would result in a continuation of current development patterns and trends. However, the No Build Alternative would not provide the transportation benefits typical of high-capacity transit projects, including encouragement of mode shift to transit and/or active transportation from personal automobiles. While highway and transit improvements would occur, Metro's LRTP predicts that traffic would continually worsen in the absence of additional transportation capacity. Therefore, the No Build Alternative would contribute to deteriorating access and mobility within Eastern Los Angeles County. Without improved transit options and connections to the regional transit network, the opportunities for transit-supportive and pedestrian-oriented development would be limited in the region.

The City of Montebello and the City of Commerce's General Plans list support of the Build Alternative. The Build Alternative is included within Metro's LRTP with funding allocated through Measure M. Therefore, the No Build Alternative would result in an adverse impact as it would conflict with Metro's LRTP and the City of Montebello and the City of Commerce's General Plans. Further, under the No Build Alternative, the adopted plans, policies, and regulations that include the Build Alternative encourage circulation improvements, community access and development, and air pollutant emissions reductions would not be supported. Overall, as shown in **Table 3.15-1**, the No Build Alternative would not fulfill or support the transportation-related objectives found in regional plans and in the general plans of the local jurisdictions because it would not integrate major transportation facilities with future land use planning. The No Build Alternative would result in increased local roadway congestion impacts on bus transit as well as arterial and freeway congestion impacts on vehicle travel that would worsen under population and employment growth for the area; there would be a long-term adverse effect.

Table 3.15-1 Transportation Impact Summary – No Build Alternative

Topic	Impact	Rationale
Transit	Adverse Effect	▪ Inconsistent with Metro’s LRTP, Metro Measure M funding, and individual corridor jurisdictions’ General Plans that list support of the Eastside Phase 2 Project ▪ Would not provide the regional transportation benefits typical of high-capacity transit projects, including encouragement of mode shift to transit to lower regional VMT
Regional Transportation	Adverse Effect	▪ Inconsistent with Metro’s LRTP, Metro Measure M funding, and individual corridor jurisdictions’ General Plans that list support of the Eastside Phase 2 Project ▪ Would not provide the regional transportation benefits typical of high-capacity transit projects, including encouragement of mode shift to transit to lower regional VMT ▪ Increase in vehicle traffic and congestion is projected to result in a decrease in average vehicle speeds of 9 percent in the region
Local Roadway Circulation	Adverse Effect	▪ Inconsistent with Metro’s LRTP, Metro Measure M funding, and individual corridor jurisdictions’ General Plans that list support of the Eastside Phase 2 Project ▪ Local population and employment growth would result in increased local roadway congestion
Pedestrian and Bicycle Circulation	No Adverse Effect	▪ No known planned and approved projects that would alter the pedestrian or bicycle circulation from their existing configuration
Emergency Access	No Adverse Effect	▪ No known planned and approved projects that would alter emergency access from its existing conditions or create safety hazards in the Study Area

Source: Metro; CDM Smith/AECOM JV 2026.

Key: LRTP = Long Range Transportation Plan; VMT = Vehicle Miles Traveled

3.15.3 Build Alternative

3.15.3.1 Transit

The Build Alternative would provide transit travel time savings compared to the No Build Alternative. Travel time for bus service between the Atlantic/Pomona station and Greenwood station would be 24 minutes and 17 minutes by automobile. In comparison, the Build Alternative light rail transit service would have a travel time of less than 8 minutes. **Table 3.15-2** shows the total travel time between the stations by bus service and automobile with and without the Build Alternative. Atlantic/Pomona station and Greenwood station, which would have a travel time savings of 9 and 16 minutes compared to the No Build Alternative.

Table 3.15-2 Build Alternative Travel Time Comparison – Average Travel Time between Proposed Stations

Stations	No Build Alternative Average Automobile Travel Time (minutes)	No Build Alternative Average Peak Bus Travel Time (minutes) ¹	Build Alternative Average Peak Light Rail Transit Travel Time (minutes) ²
Atlantic/Pomona - Atlantic/Whittier	4.2	6.9	2.3
Atlantic/Whittier - Commerce/Citadel	4.5	5.1	2.4
Commerce/Citadel - Greenwood	7.9	12.4	3.2
Atlantic/Pomona - Greenwood	16.6	24.4	7.9

Source: CDM Smith/AECOM JV 2026, **Appendix O**.

Notes: Average travel times are average of both directions in minutes.

There is no existing or planned direct transit service between Atlantic/Pomona and Greenwood stations.

¹ Travel times from 2050 No Build Alternative peak-period model run, average of both directions of travel.

² Travel times from 2050 Build Alternative peak-period model run.

The Build Alternative would support several regional and local plans and policies and would not conflict with adopted regional or local policies or plans (**Table 3.15-1**). The Build Alternative would also enhance transit connectivity between the stations and the surrounding areas and encourage mode shift to transit, and thereby increase ridership countywide when compared to the No Build Alternative. Therefore, the Build Alternative would not result in a long-term adverse effect related to transit operations.

MSF Sites 1, 2, and 3 would not conflict with local or regional transit operations or with adopted regional or local policies or plans. The transition from Washington Boulevard to MSF Sites 1 and 2 would be in an aerial configuration, and there would be no delay to roadway traffic when a light rail vehicle makes the turn from Washington Boulevard to MSF Site 1 or 2. The lead tracks to MSF Site 3 would occur as the underground alignment transitions to the aerial alignment and there would be no delay in roadway traffic. No transit routes operate on Saybrook Avenue, Gayhart Street, Acco Street or Yates Avenue. Therefore, MSF Site 1, 2, or 3 would not result in a long-term adverse effect.

3.15.3.2 Transportation Network

Table 3.15-3 compares the estimated average daily VMT, vehicle hours traveled, number of vehicle trips, and average vehicle speeds for the No Build Alternative and the Build Alternative. As shown in **Table 3.15-3**, the Build Alternative would result in 8,000 reduced VMT daily and 1,000 reduced vehicle hours traveled compared to the No Build Alternative in the 2050 horizon year. Therefore, the Build Alternative would not result in a long-term adverse effect related to the regional transportation network.

Table 3.15-3 Regional Transportation in 2050 Horizon Year – Build Alternative versus No Build Alternative

Region-wide Statistics	2050 with No Build	2050 with Build Alternative	Change	Percent (%) Change
Vehicle Miles Traveled	577,229,000	577,221,000	-8,000	0.00%
Vehicle Hours Traveled	19,247,000	19,246,000	-1,000	-0.01%
Average Vehicle Speed (miles per hour)	30	30	0	0.00%
am Peak Vehicle Trips	9,707,000	9,706,000	-1,000	-0.01%
pm Peak Vehicle Trips	12,956,000	12,955,000	-1,000	-0.01%

Source: CDM Smith/AECOM JV 2026, **Appendix O**.

Key: am = ante meridiem; pm = post meridiem

The operation of MSF Site 1, 2, or 3 (e.g., maintenance workers commuting to and from the MSF and truck delivery of goods, services, or equipment) would not result in an increase in VMT as the MSF Site would involve a light industrial use (transit fleet maintenance) taking place at an infill site within an established light industrial district. The MSF would provide critical functions for the daily operation and maintenance of the proposed transit service. Thus, the VMT reductions with operation of the proposed transit service would not be possible without the MSF, and those VMT reductions would offset any operational VMT attributable to the MSF. Measures to address changes to traffic circulation would be implemented as described in NPM TRA-1 (Operational Best Management Practices for Transportation). The MSF, therefore, would not generate different VMT characteristics than the surrounding existing uses such that it could result in an adverse effect related to VMT. Therefore, operation of MSF Site 1, 2, or 3 would not result in a long-term adverse effect related to regional transportation network.

3.15.3.3 Local Roadway Circulation

Components of the Build Alternative and the MSF would include new traffic signals or modifications to existing traffic signals to accommodate light rail movements and traffic circulation patterns at intersections, enhancements to existing signalized crosswalks, and bicycle circulation and access amenities in immediate station areas. The Build Alternative would result in a reduction of general-purpose travel lanes (two to one lane on 3rd Street in the eastbound direction between Civic Center Way and the new Sheriff's Department access road and from three to two lanes in each direction along Washington Boulevard between Saybrook Avenue and Carob Way) and elimination of left turns (3rd Street and La Verne Avenue and 3rd Street and Civic Center Way as well as ingress/egress movements at driveways and selected cross streets along Washington Boulevard. As identified in NPM TRA-1, the Build Alternative would not preclude vehicle or truck access along Washington Boulevard (and therefore driveway access would be maintained), and left-turn movements would continue to be allowed to and from major cross-streets (e.g., Garfield Avenue, Greenwood Avenue) at signalized intersections. Although the Build Alternative would result in a reduction of three to two in travel lanes in each direction along Washington Boulevard that would shift travel patterns along the corridor, the 1 mile segment along Washington Boulevard would still have signalized intersections for vehicles to turn around and get to their destination with minimal backtracking. MSF Sites 1, 2, and 3 would involve only minor changes to traffic circulation, including new or modified driveways. Additionally, if MSF Site 1 is selected, Acco Street would be closed to through access, and a cul-de-sac would be constructed on the westerly side of the lead tracks. The closure of Acco Street to through traffic would have a negligible effect on traffic circulation. Changes to traffic circulation would be designed according to applicable standards and criteria.

The purpose of the Build Alternative is to improve transportation and mobility in the area. As shown in **Table 3.15-2**, the improved transit access and travel times would result in a beneficial effect on transit users in the Study Area. Furthermore, the Build Alternative would not take away a transportation use, but instead would repurpose vehicle travel lanes for transit-only use. This increased transit use would reduce overall VMT, providing a beneficial effect. Therefore, operation of the Build Alternative would not result in a long-term adverse effect related to local roadway circulation.

Table 3.15-4 shows all the intersections that operate at Level of Service (LOS) E/F or degrade LOS between the No Build Alternative and Build Alternative. The increases in delay for the intersections listed along Washington Boulevard are due to the reduction in travel lanes along this corridor under the Build Alternative. Other intersections along Atlantic Boulevard could experience minor delays of less than 1 second per vehicle. The potential delay at intersection number 8 (Woods Avenue/Beverly Boulevard/3rd Street/Pomona Boulevard) would increase by 64 seconds per vehicle (21 percent increase) in the am peak period due to slight increase in traffic detours under the Build Alternative, but this intersection operates at LOS F under both the No Build Alternative and the Build Alternative and in both am and pm peak hours. The potential delays could result from the new guideway and roadway configuration, which includes northbound lane and westbound lane closures and intersection configuration change at intersection number 8 (3rd Street/Pomona Boulevard). The intersection operates at LOS F in both am and pm peak periods under the No Build Alternative.

As shown in **Table 3.15-4**, under the Build Alternative, intersection number 34 (Vail Avenue and Washington Boulevard) operates at LOS F in both am and pm peak periods and would have a delay increase of 19 seconds in the pm peak period because of an increase in traffic from detours. The potential delays could result from the eastbound lane and westbound lane closures at intersection number 35 (Washington and Maple) with LOS A, and eastbound/westbound lane reductions along Washington Boulevard. This only represents a 3 percent increase in vehicle delay compared to No Build Alternative.

The Build Alternative would result in a single intersection (Garfield Avenue and Washington Boulevard) to move from Level of Service D to Level of Service E in the pm peak due to the reduction in travel lanes on Washington Boulevard. The reduction of the Garfield Avenue and Washington Boulevard intersection level of service from Level of Service D to Level of Service E in the pm peak period would be an adverse effect. NMM TRA-1 (Garfield Avenue and Washington Boulevard Intersection) would require one through lane to be converted into a left-turn lane and the right-turn lane to be reconfigured at Intersection #32 (Garfield Avenue and Washington Boulevard) to optimize this intersection's cycle length and splits; as shown in **Table 3.15-5**, this mitigation would improve the level of service at Intersection #32 so that it operates at Level of Service D in both the am and pm peak periods. With the implementation of NMM TRA-1, there would be no long-term adverse effect.

Table 3.15-4 The No Build Alternative and Build Alternative (2050) Conditions LOS Analysis

#	Intersection	No Build Alternative				Build Alternative			
		am Peak Hour		pm Peak Hour		am Peak Hour		pm Peak Hour	
		Delay (Seconds/ Vehicle)	LOS	Delay (Seconds/ Vehicle)	LOS	Delay (Seconds/ Vehicle)	LOS	Delay (Seconds/ Vehicle)	LOS
8	Woods Ave and Beverly Blvd and 3rd Street/Pomona Blvd	311.3	F	702.0	F	375.9	F	705.8	F
11	Atlantic Blvd and Beverly Blvd	45.7	D	55.8	E	45.3	D	55.4	E
14	Atlantic Blvd and Eagle Street	14.8	B	11.2	B	15.4	B	11.5	B
17	Ferris Avenue and Whittier Blvd	10.3	B	9.9	A	10.5	B	10.1	B
24	Atlantic Blvd and Triggs Street/Goodrich Blvd and Telegraph Road/Ferguson Drive	123.3	F	129.1	F	123.3	F	128.5	F
26	Vail Avenue and Mines Avenue	29.4	D	62.4	F	28.8	D	62.4	F
27	Garfield Avenue and Flotilla Street	18.9	B	74.5	E	18.7	B	74.3	E
31	Gayhart Street and Washington Blvd	5.4	A	8.6	A	6.4	A	10.0	B
32	Garfield Avenue and Washington Blvd	42.9	D	54.9	D	46.3	D	60.7	E
34	Vail Avenue and Washington Blvd	263.7	F	619.6	F	268.0	F	638.3	F
36	Greenwood Avenue and Washington Blvd	12.3	B	15.6	B	28.2	C	40.1	D
37	Montebello Blvd and Washington Blvd	8.6	A	5.5	A	17.0	B	7.2	A

Source: CDM Smith/AECOM JV 2026, **Appendix O**.

Notes: **Boldface** type indicates that the intersection operates at LOS (LOS E/F).

Key: LOS = Level of Service

Table 3.15-5 Garfield Avenue and Washington Boulevard Intersection Analysis with Mitigation

Intersection	Traffic Control Type	am Delay (Seconds/ Vehicle)	am Level of Service	pm Delay (Seconds/ Vehicle)	pm Level of Service
Build Alternative Without Mitigation	Signal	46.3	D	60.7	E
Build Alternative With Mitigation	Signal	51.0	D	54.6	D

Source: CDM Smith/AECOM JV 2026, **Appendix O**.

Key: am = ante meridiem; pm = post meridiem

The projected maximum vehicle queues at all analyzed freeway off-ramps would not exceed the available queuing space during either the weekday am or pm peak hours, except at Interstate 5 northbound Ramps/ Woods Avenue and Telegraph Road (Intersection #23). However, the projected maximum vehicle queues at all analyzed freeway off-ramps would remain within the overall available queuing space during both the weekday am and pm peak hours, and the projected vehicle queues would not back up into the freeway mainline. Therefore, the Build Alternative would not result in any long-term adverse effects on local roadway circulation (and off-ramp queue delay).

3.15.3.4 Parking

Table 3.15-6 displays the existing and proposed parking supply adjacent to the proposed station locations. The Build Alternative would require the removal and displacement of existing off-street parking facilities to accommodate operation of the stations, associated parking facilities, and the physical track structure. For off-street parking spaces that are associated with full takes of parcels and their businesses, the demand for these spaces would be eliminated as well. As such, there would be no adverse effects on off-street parking with the full removal of these parcels. Similarly, at the Commerce/Citadel station, the main operation of The Citadel would be maintained, and replacement parking spaces will be situated elsewhere within the property. With existing parking management methods deployed at the Citadel, such as valet parking, shuttles, remote parking, employee parking programs, as well as a reduction in parking demand due to new transit access provided by the Build Alternative, there would be no adverse effects on off-street parking at this site. MSF Sites 1, 2, and 3 would provide sufficient on-site parking for employees, and no operational spillover parking effects on off-street or on-street parking facilities would occur. As such, the MSF would not result in a long-term adverse effect related to off-street parking. **Appendix O** provides more information regarding the number of parking spaces anticipated to be affected by the Build Alternative.

Table 3.15-6 Station Parking (Existing and Build Alternative)

Intersection	Existing Off-Street Parking	Build Alternative Parking
Atlantic/Pomona	Public parking facility and surface lot providing 280 paid public parking spaces.	Utilize the existing parking facility located north of the 3rd Street and Atlantic Boulevard intersection.
Atlantic/Whittier	Private surface parking lots serving adjacent commercial properties. No public parking facility.	None
Commerce/Citadel	Private surface parking lots serving Citadel Outlets, private offices, hotels, and adjacent businesses. No public parking facility.	75 parking spaces would be removed and relocated near the Commerce/Citadel station. The main operation of the Citadel would be maintained, and replacement parking spaces situated elsewhere within the property.
Greenwood	Private surface parking lots serving adjacent commercial properties. No public parking facility.	New parking facility with 270-370 dedicated station parking spaces to be located on southwest corner of this intersection.

Source: CDM Smith/AECOM JV 2026, **Appendix O**.

3.15.3.5 Pedestrian and Bicycle Circulation

Project design would maintain adequate sidewalk widths along aerial portions of the alignment and at station locations. Additional enhancements to existing signalized crosswalks, such as continental crosswalks, would further improve pedestrian circulation and non-motorized access to transit stations as identified in NPM TRA-1.

Overall, the Build Alternative would enhance walkability in the immediate vicinity of the proposed station areas and include improvements coordinated with the local jurisdictions. For the at-grade portion of the alignment within Montebello, narrow sidewalk widths (5 to 8 feet compared to 12 feet for the aerial configuration in Commerce) would be required to accommodate the at-grade track alignment along Washington Boulevard. The adjustment in sidewalk width would occur along Washington Boulevard from 620 feet west of Vail Avenue to the intersection of Washington Boulevard and Vail Avenue. These narrow sidewalks would still meet the Americans with Disabilities Act minimum requirements and would not conflict with any identified local programs, plans, or policies. Therefore, the Build Alternative would not result in a long-term adverse effect related to pedestrian circulation.

The City of Montebello has proposed bicycle facilities along Flotilla Street and Vail Avenue along the perimeter roadways of MSF Sites 1 and 2. For MSF Site 3, there are no existing or proposed bicycle facilities on the perimeter roadways (Gayhart Street and Saybrook Avenue) and the MSF would operate within the existing industrial parcel. The potential for conflicts between bicyclists and light rail transit operations would be minimal or non-existent and the proposed bicycle facilities would not conflict nor be blocked by MSF Site 1, 2, or 3 during operations. Therefore, operation of the MSF, no matter which site is selected, would not result in an adverse effect related to bicycle circulation. The industrial areas around MSF Sites 1, 2, and 3 have limited pedestrian and bicycle activity. No plans or programs are approved that will expand or enhance the pedestrian network immediately surrounding the MSF sites; therefore, removing sidewalks in the area around the MSF sites would not result in a long-term adverse effect related to pedestrian circulation during operations.

3.15.3.6 Emergency Access

Operation of the Build Alternative would potentially result in an increase in fire and police protection response times as a result of response delays at new grade crossings if the emergency response vehicle arrives at the same time as a train; however, emergency response times would remain at acceptable levels due to the short length of the light rail transit trainsets and the short time required for light rail transit vehicles to enter and exit the crossings and with implementation of the standard coordination and design practices identified above and in NPM TRA-1 (as shown in **Table 3.15-5**, including compliance with code requirements pertaining to emergency vehicle access and building standards also ensure that response times are maintained at acceptable levels). Additionally, Metro will coordinate with fire and police officials when designing grade crossings to maintain access for police and fire protection services. As a result, operation of the Build Alternative would not result in a long-term adverse effect related to emergency access.

MSF Sites 1, 2, and 3 would be in proximity to the core of the greater Los Angeles metropolitan area and would involve light industrial uses (transit fleet storage, service repair and maintenance) at an infill site within an established light industrial district. Changes to traffic circulation would be implemented as described in NPM TRA-1. Emergency responders would still have priority to pass through an intersection with the siren on; given that trains would be operating in exclusive street-running ROW at these locations, it would be possible for trains to clear signaled and unsignalized intersections quickly to allow emergency vehicles to pass. Therefore, response times would remain acceptable. The MSF site options would include changes to traffic circulation, such as new or modified driveways; however, these changes would be designed according to applicable state, Metro, and local design criteria and standards as identified in NPM TRA-3 (Operational Best Management Practices for the Maintenance and Storage Facility Regarding Transportation). As such, operation of MSF Site 1, 2, or 3 would not result in a long-term adverse effect related to emergency access.

3.15.4 Avoidance, Minimization, and Mitigation Measures for the Build Alternative

The measures identified in **Table 3.15-7** would be implemented for the Build Alternative in the long term. Construction measures are provided in **Section 3.17**.

Table 3.15-7 Long-Term Avoidance, Minimization, and Mitigation Measures

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
Regional Transportation, Local Roadway Circulation, Pedestrian and Bicycle Circulation, and Emergency Access	Potential regional transportation, local roadway circulation, pedestrian and bicycle circulation, and emergency access effects during operation of the Build Alternative.	NPM TRA-1 (Operational Best Management Practices for Transportation). Operational best management practices (BMP) for the Project shall include the following: ▪ Sidewalks shall not be altered to the extent that pedestrian circulation would be impaired or in violation of Americans with Disabilities Act (ADA) standards. ▪ Additional enhancements to the existing signalized crosswalks, such as marked crosswalks and lighting, shall further improve pedestrian circulation and non-motorized access to transit stations. ▪ Metro shall coordinate with local jurisdictions to enhance walkability in the immediate vicinity of the proposed station areas. ▪ Operation of the Project shall not conflict with any identified local programs, plans, or policies for circulation elements in coordination with local jurisdictions. ▪ New traffic signals or modifications to existing traffic signals (e.g., signal phasing changes) to accommodate light rail movements, traffic circulation patterns at intersections, grade crossings, and to facilitate pedestrian access to/from stations (e.g., mid-block crossings at stations) shall be designed in accordance with the Metro Rail Design Criteria (MRDC) and standards. ▪ Bicycle circulation and access amenities shall be provided in the immediate station areas. Amenities may include bike parking and connections to existing nearby bike facilities within up to a 600-foot radius to improve bicycle-to-transit connections, and shall be determined during preliminary engineering. ▪ Proposed bicycle facilities that intersect the Project at applicable intersections shall remain accessible and allow bicyclists and pedestrians to cross at those intersections. ▪ Project operations shall not preclude vehicle or truck access along Washington Boulevard, and left-turn movements shall continue to be allowed to and from major cross-streets (e.g., Garfield Avenue, Greenwood Avenue) at signalized intersections. ▪ Stations and grade crossings shall be designed in accordance with the MRDC, including Fire/Life Safety Design Criteria, to ensure safety and minimize potential hazards at all locations.	Project Measure	No Adverse Effect - Operational best management practices for the Build Alternative would be implemented

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
		▪ The Project shall be operated per applicable State, Metro, and city design criteria and standards, including adherence to design codes and standards such as the Occupational Safety and Health Administration (OSHA), California Division of Occupational Safety and Health Administration (Cal/OSHA), California Public Utilities Commission (CPUC), California Manual of Uniform Traffic Control Devices (MUTCD), Metro safety and security programs and standards (i.e., MRDC and Metro Systemwide Station Design Standards Policy), and building standards to ensure emergency vehicle access and response times are maintained at acceptable levels. ▪ Best practice safety measures shall be implemented to minimize potential conflicts between vehicles and pedestrians. Measures may include mid-block crosswalks, signal-protected pedestrian movements, channelization, barriers high visibility curbs between the guideway and roadway to prohibit vehicles from driving onto the tracks, barriers to protect and route pedestrians, ADA-compliant curb ramps, and warning signs to provide for convenient and safe access to station platforms. ▪ Uncontrolled mid-block vehicular crossings of tracks and mid-block left-turns shall not be permitted and shall be physically prohibited by a curb between the roadway and at-grade guideway with a fence between the two tracks in the center of the guideway whenever feasible. ▪ Grade crossings shall include traffic signal coordination and upgrades in accordance with MRDC to avoid conflicts between light rail vehicles (LRV) traffic along Washington Boulevard. ▪ Vehicular and pedestrian crossings across the at-grade segments of the alignment shall be limited to intersections controlled by traffic signals.		

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
Emergency Access	Potential emergency access effects during operation of the MSF.	NPM TRA-3 (Operational Best Management Practices for the Maintenance and Storage Facility Regarding Transportation). Operational best management practices (BMP) for the maintenance and storage facility (MSF) include the following: Access shall be maintained to properties to the west of the vacated portion of Acco Street via Yates Avenue (for MSF Site 1). Access shall be maintained on Yates Avenue (for MSF Site 2). Access shall be maintained on Gayhart Street (for MSF Site 3). Any roadway changes shall be designed according to applicable Metro Rail Design Criteria (MRDC), state, and local design criteria and standards where applicable, including fire code and Fire/Life Safety Design Criteria and standards, and shall provide adequate emergency access.	Project Measure	No Adverse Effect - Operational best management practices for the Build Alternative would be implemented for the MSF
Local Roadway Circulation	Potential local roadway circulation effects during operation of the Build Alternative	NMM TRA-1 (Garfield Avenue and Washington Boulevard Intersection). At the Garfield Avenue and Washington Boulevard (Intersection #32), restripe the southbound lane approach by converting one through lane into a second left-turn lane and reconfiguring the right-turn lane as a shared through/right-turn lane to optimize this intersection's cycle length and splits.	Mitigation Measure	No Adverse Effect - Potential local roadway circulation effects during operation of the Build Alternative would be reduced

Source: CDM Smith/AECOM JV 2026, **Appendix O**.

3.16 Utilities

This section evaluates the potential long-term effects of the No Build Alternative and the Build Alternative on utilities (i.e., electrical, sewer, storm drain, natural gas, telecommunication, water supply, and solid waste disposal). Short-term construction effects are discussed in **Section 3.17** (Construction).

The assessment of reasonably foreseeable effects in this section is based upon the temporal and geographic proximity parameters detailed in **Chapter 3.0** (Introduction).

3.16.1 Affected Environment

The Study Area for this analysis is the 0.5-mile to 2-mile radius from the guideway centerline described in **Section 3.1.1** (Study Area) with a focus on the area within 0.25 mile of the Build Alternative where physical and operational impacts on utility supply lines are most likely to occur. This is considered within the larger context of the service area for local utilities and their capacity to serve the Build Alternative. Regulations related to utilities applicable to the Project are summarized in **Appendix S** (Regulatory Setting Summary).

This section evaluates the potential changes in utility demand as a result of the No Build Alternative and the Build Alternative; consequences of the changes in demand based on the type, size, and location of existing facilities; and whether existing facilities would have sufficient resources and/or capacity to accommodate a change in utility demand. Existing conditions information presented in the following subsections provide a basis for assessing impacts.

3.16.1.1 Utility Providers

Utility providers within the Study Area are listed in **Table 3.16-1**.

Table 3.16-1 Utilities, Providers, and Areas Served

Utility	Provider(s)	Area Served
Electrical	Southern California Edison	Study Area
Gas	Southern California Gas	Study Area
Water Supply	Central Basin Municipal Water District	Study Area (Central Basin Municipal Water District 2021)
Water Supply	California Water Service East Los Angeles District	City of Commerce, a portion of the City of Montebello, and unincorporated East Los Angeles (California Water Service 2021)
Water Supply	South Montebello Irrigation District	A portion of the City of Montebello (University of California Los Angeles 2017)
Water Supply	San Gabriel Valley Water Company	A portion of the City of Montebello (San Gabriel Valley Water Company 2021)
Water Supply	Metropolitan Water District	A portion of the City of Montebello
Sanitary Sewer	Los Angeles County Sanitation Districts	Los Angeles County (Los Angeles County Sanitation Districts 2021)
Sanitary Sewer	Los Angeles County Department of Public Works	The Los Angeles County Department of Public Works may operate sanitary sewer facilities in addition to the facilities under the purview of the Los Angeles County Sanitation Districts
Sanitary Sewer	County Sewer Maintenance District	Los Angeles County
Sanitary Sewer	City of Montebello	City of Montebello

Utility	Provider(s)	Area Served
Sanitary Sewer	City of Commerce	City of Commerce
Storm Drains	Los Angeles County Flood Control District	Los Angeles County (within city boundaries, local storm drain facilities are owned and operated by each local jurisdiction's public works department)
Solid Waste	Los Angeles County Flood Control District, Los Angeles County Public Health Department	Los Angeles County (Los Angeles County Department of Public Works 2021)
Telecommunications	Private companies provide telecommunication services including phone, internet, and television cable throughout the region	Southern California Region
Oil	Private companies own oil wells and oil lines throughout the study area	Study Area

Source: CDM Smith/AECOM JV 2026.

3.16.1.2 Electricity and Natural Gas

Southern California Edison supplies electricity and the Southern California Gas Company provides natural gas to the Study Area. Southern California Edison provides service to approximately 15 million people in portions of 15 counties, including Los Angeles County (Southern California Edison 2019). The Southern California Gas Company's service area covers 12 counties and 220 incorporated cities, including Los Angeles County (Southern California Gas Company 2025).

3.16.1.3 Water Supply

The Metropolitan Water District of Southern California is the principal water distributor of imported water in southern California, providing water to 26 public water agencies across southern California, including agencies located within the region (Central Basin Municipal Water District 2021). The Central Basin Municipal Water District is a member agency that receives supplies from the Metropolitan Water District and supplies that water to local supply agencies in the Study Area, including the Cal Water East Los Angeles District, South Montebello Irrigation District, and San Gabriel Valley Water Company.

The California Water Service East Los Angeles District's Urban Water Management Plan states that the 2020 water demand totaled 14,265-acre feet, equaling the volume of water supplied. The Urban Water Management Plan projects that groundwater volume would remain constant, imported water purchases would decline through 2045, and demand for potable and raw water would decline through efficiency gains (California Water Service 2021). South Montebello Irrigation District's supply is entirely groundwater sourced from four active wells, including one well approximately 150 feet north of the at-grade alignment (Geokinetics Inc. 2025). In 2010, total water supplied by the district was 2,069-acre feet (University of California Los Angeles 2017). The San Gabriel Valley Water Company's Urban Water Management Plan reported a 2020 water supply of 33,632-acre feet and a demand of 32,130-acre feet for raw and potable water, with demand projected to grow to 38,700-acre feet by 2045 (San Gabriel Valley Water Company 2021).

3.16.1.4 Sanitary Sewer

Los Angeles County Sanitation Districts operates 10 water reclamation plants and one ocean discharge facility (Joint Water Pollution Control Plant), which treat approximately 400 million gallons per day (Los Angeles County Sanitation Districts 2021). Within the Sanitation Districts' service area, there are approximately 9,500 miles of sewers that are owned and operated by the cities and county that are tributary to the Sanitation Districts' wastewater collection system. The Study Area is served by District 2. Local sewers within the Study Area, except for Montebello, are operated by the Los Angeles County Department of Public Works Consolidated Sewer

Maintenance District. Local sewers within the City of Montebello are owned and operated by Montebello Public Works.

3.16.1.5 Storm Drains

Urban run-off in the region is diverted to the appropriate storm drains and into catch basins. The collected stormwater flows through a network of pipes and open channels and is then typically released directly into the Pacific Ocean. Los Angeles County Flood Control District stormwater infrastructure, including drains, channels, catch basins, and debris basins, is present throughout the Study Area. Additionally, within city boundaries, local storm drain facilities are owned and operated by each local jurisdiction's public works department.

3.16.1.6 Telecommunications

According to the California Public Utilities Commission's Interactive Broadband Mapper, the region is well serviced by a variety of internet service providers and internet transmission infrastructure and has extensive mobile phone coverage (California Public Utilities Commission 2023).

3.16.1.7 Solid Waste Capacity

Los Angeles County anticipates adequate solid waste disposal capacity to be available over the next 15-year planning period (2019 to 2034) with implementation of actions such as increasing waste and diversion efforts, encouraging development of alternative technologies, export of waste out of county, and expanding in-county Class III landfill capacity, if environmentally sound and technically feasible (Los Angeles County Department of Public Works 2021). The Los Angeles County Public Health Department manages enforcement and permitting for facilities that receive and dispose of solid waste. **Table 3.16-2** lists the largest active and regulatory permitted solid waste facilities that are serving Los Angeles County with the permitted capacity and anticipated closure date.

Table 3.16-2 Solid Waste Disposal Landfills

Landfill Site Name	Location	Maximum Permit Capacity [Tons Per Year]	Remaining Capacity [Tons Per Year]	Remaining Capacity Date	Closure Date
Antelope Valley Public	Palmdale	30,200,000	12,194,026	6/1/2017	4/1/2044
Azusa Land Reclamation	Azusa	80,571,760	44,554,299	10/8/2020	1/1/2045
Clean Harbors Buttonwillow	Buttonwillow	13,250,000	N/A	N/A	1/1/2040
Lancaster Landfill and Recycling Center	Lancaster	27,700,000	13,017,160	8/5/2012	3/1/2044
Savage Canyon	Whittier	19,337,450	7,612,583	5/18/2023	12/31/2079
Sunshine Canyon	Sylmar	140,900,000	66,200,000	5/6/2024	10/31/2037

Source: California Department of Resources Recycling and Recovery 2025a; 2025b; 2025c; 2025d; 2025e; 2025f.

Key: N/A = Not applicable

3.16.2 No Build Alternative

The No Build Alternative, as described in **Section 2.2** (No Build Alternative) of the EA, would include already planned and funded roadway and transit projects but would not provide a rail transit option for communities in eastern Los Angeles County. The No Build Alternative would not result in changes in demand for utility and service systems, nor would it result in project-related utility disruptions or relocations, or require new or expanded utilities facilities or infrastructure outside of already planned transit and roadway projects. Overall, as shown in **Table 3.16-3**, the No Build Alternative would result in no long-term adverse effect on utilities.

Table 3.16-3 Utilities Impact Summary – No Build Alternative

Topic	Impact	Rationale
Utilities and Service Systems	No Adverse Effect	Already planned transit and roadway projects under the No Build Alternative would comply with codes and standards such as Title 20 of the California State Code of Regulations, the California Plumbing Code, California Green Building Standards Code, and local regulations pertaining to utilities and would not require notable relocation or construction of new or expanded utility infrastructure.

Source: Metro; CDM Smith/AECOM JV 2026.

3.16.3 Build Alternative

3.16.3.1 Water Supplies and Facilities

Under the Build Alternative, the light rail transit guideway and stations would consume water for landscaping irrigation and to supply fire sprinkler systems when needed. The MSF would consume water for landscaping irrigation, vehicle washing/rinsing, fire sprinkler systems, and typical employee breakroom/kitchen uses. The amount of water consumed for these activities would be less than the projected future capacity of available water supplies and would not have any substantial effect on the water supply.

This is supported by the utility planning information and water supply reliability framework presented in Appendix F, Utilities Service/Systems and Energy Conservation Impacts Report, of the Recirculated Draft EIR for the Project (Metro 2024c) and the estimated water demand based on California Emission Estimator Model results presented in Appendix C, Air Quality Impacts Report, Attachment C, of the Recirculated Draft EIR (Metro 2024d). Based on California Emission Estimator Model demand factors for warehouse uses, operation of an approximately 30-acre MSF was estimated to result in a demand of 125 acre-feet per year. This was determined to be a conservative estimate as the water demand associated with the MSF use was expected to be lower than the warehouse demand factor used in the analysis (Metro 2024d). Local suppliers in the Study Area plan for anticipated demands through Urban Water Management Plans that assess the current and projected supplies/demands for providers serving the corridor. For instance, the California Water Service East Los Angeles District Urban Water Management Plan reports a 2020 demand of 14,265 acre-feet equaling the volume supplied, and it projects demand to decline through efficiency gains through 2045. The San Gabriel Valley Water Company Urban Water Management Plan reports a 2020 supply of 33,632 acre-feet and demand of 32,130 acre-feet, with demand projected to increase to 38,700 acre-feet by 2045 (with supply anticipated to grow correspondingly). Consistent with these planning assumptions, the operation of the Build Alternative and MSF would result in only a small percentage increase in municipal water demand and would not significantly deplete municipal water supplies during normal, dry, or multiple dry years (Metro 2024c). Further, any water use would be compliant with Metro’s Water Use and Conservation Policy (Metro 2009) and the MSF employee breakroom, kitchen, and bathroom would, at a minimum, comply with current state and local codes, including the California Green Building Standards Code (California Code of Regulations Title 24, Part 11) and the California Plumbing Code (Title 24, California Code of Regulations, Part 5), which mandate installation of water-conserving plumbing fixtures and fittings (e.g., water efficient toilets). Therefore, the Build Alternative would not result in a long-term adverse effect on water supplies or facilities because of compliance with state and local codes and Metro’s policies.

3.16.3.2 Wastewater Treatment Facilities and Capacity

The proposed light rail transit stations would not have public restrooms and would not generate wastewater. Elevators would be equipped with emergency ejector pits, and underground stations and control rooms at at-grade stations would be equipped with sump pumps/clarifiers that would drain to the sewer in the event of a flood. Any discharges associated with these connections would be intermittent and irregular in the event that flooding occurs, and would not exceed the capacity of the wastewater treatment facilities. The MSF would result in additional wastewater-generating facilities (e.g., sinks, toilets, vehicle washing) that are anticipated to be slightly higher than or similar to existing industrial land uses that currently operate at the MSF site option locations. The amount of wastewater entering the sewer system from the MSF would be reduced through conformity to all applicable Los Angeles Regional Water Quality Control Board wastewater standards. The Build Alternative would not require the expansion of an existing facility or construction of a new facility or result in adverse effects on wastewater treatment facilities or capacity.

3.16.3.3 Stormwater Facilities

The Build Alternative is in a largely impervious urbanized area that has existing storm drain infrastructure. The proposed light rail transit guideway, stations, and the MSF would result in a negligible increase in impervious surfaces, but not to an extent that would lead to increased runoff, as discussed in **Section 3.10** (Water Resources). The Build Alternative would also include low impact design features to facilitate drainage flow in compliance with stormwater control requirements, such as those established in the applicable California Building Standards Code and set forth in NEPA Project Measure (NPM) HWQ-1. Since the Build Alternative would not contribute to additional runoff, the Build Alternative would not result in long-term adverse effects on stormwater drainage facilities.

3.16.3.4 Electric Power

The proposed light rail transit guideway and stations would consume electricity from traction power and lighting, respectively. The MSF would consume electricity from traction power, lighting, and powering of maintenance equipment. The amount of electricity consumed for the Build Alternative would be less than the projected future capacity of electricity supplies available. This is supported by the electric utility service context and quantified operational demand estimates, summarized in Appendix F, Utilities Service/Systems and Energy Conservation Impacts Report, of the Recirculated Draft EIR for the Project (Metro 2024c). Southern California Edison is the electric utility that would serve the corridor and California Energy Commission planning-area data shows electricity consumption on the order of 104,406.6 million kilowatts (2018) with a planning forecast of 110,000 million kWh for the same planning area. Electricity demand would increase by a total of 2.2 million kilowatts associated with operation of the Build Alternative, including approximately 0.8 million kilowatts per year required by a 30-acre MSF (Metro 2024c). Further, regional electricity supplies are becoming increasingly renewable, with a minimum 60 percent renewable energy portfolio required to be achieved for public energy providers in the State of California by 2030, and a 100 percent renewable portfolio standard (i.e., fully renewable grid energy supply) required by 2045, which supports that the Build Alternative would not adversely affect electric power supply or facilities. The aerial guideway would require relocation of utility support poles, which would not result in an expansion of electric utility infrastructure or electricity usage. As referenced in **Section 3.17**, utility relocation or modification efforts would involve coordination with local service providers in accordance with the terms and agreements of each utility provider. As such, the Build Alternative would not result in long-term adverse effects on electric power supply or facilities.

3.16.3.5 Natural Gas

The proposed light rail transit guideway and stations would not consume natural gas, and therefore would not require expansion of natural gas facilities to support operations. Operation of the MSF could consume natural gas for routine maintenance activities and heating if the required equipment is fueled by natural gas instead of electricity. However, the amount consumed would be substantially less than the projected future capacity of natural gas supplies. No new construction or notable expansion of an existing facility would be required. This is supported by quantified demand estimates, summarized in Appendix F, Utilities Service/Systems and Energy Conservation Impacts Report, of the Recirculated Draft EIR for the Project (Metro 2024c). This includes a natural gas demand of approximately 0.2 billion British thermal units per year for comfort heating for a 30-acre MSF in the operational energy assessment. In terms of the natural gas service context, the statewide forecasts anticipated lower demand (through 2030) compared to an earlier forecast, providing additional planning context for why the Project's incremental MSF demand would not be expected to drive supply constraints or require new upstream capacity (Metro 2024c). As such, the Build Alternative would not result in long-term adverse effects on natural gas facilities.

3.16.3.6 Telecommunication

During operations, minor telecommunication connections for equipment like emergency phones may be installed and used along the guideway. The MSF would include telecommunications infrastructure (e.g., server rooms, network equipment, cabling systems, intercom systems, phones). However, operation of the Build Alternative would not require any notable expansion of an existing facility or construction of a new facility (e.g., cell towers and 5G-enabled small cell antennas). Therefore, the Build Alternative would not result in long-term adverse effects on telecommunication facilities.

3.16.3.7 Solid Waste

Operation of the light transit guideway and stations would not include a source of solid waste although solid waste would be generated by transit users and by employees at the MSF. The disposal of solid waste from waste and recycle bins would have no notable potential to affect landfill capacity or impair attainment of solid waste reduction goals. Thus, the Build Alternative would not result in a long-term adverse effect related to solid waste generation.

3.16.4 Avoidance, Minimization, and Mitigation Measures for the Build Alternative

The measures identified in **Table 3.16-4** would be implemented for the Build Alternative in the long term. Construction measures are provided in **Section 3.17**.

Table 3.16-4 Long-Term Avoidance, Minimization, and Mitigation Measures

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
Water Supplies and Facilities	Anticipated to result in a slight increase in municipal water use; however, the amount consumed would be significantly less than the projected future capacity	No avoidance, minimization, or mitigation measures needed	None	No Adverse Effect
Wastewater Treatment Facilities and Capacity	The light rail transit stations would not have public restrooms and would not generate wastewater. The MSF would have a similar wastewater demand as to the existing uses that would be replaced	No avoidance, minimization, or mitigation measures needed	None	No Adverse Effect
Stormwater Facilities	The project would result in a negligible increase in impervious surfaces	NPM HWQ-1 (Operational Best Management Practices for Water Resources). Operational best management practices (BMP) may include but shall not be limited to: ▪ Treatment of stormwater runoff using infiltration BMPs such as detention basins or tanks, infiltration basins, bioretention facilities media filters, porous pavement, or vegetated filter strips to remove particulate pollutants. ▪ Development of a stormwater pollution prevention plan (SWPPP) in compliance with the State Water Resources Control Board (SWRCB) Industrial General Permit for maintenance and storage facility (MSF) operations. The SWPPP shall include BMPs such as: - o Preventing disposal of any rinse/wash waters or industrial materials into the stormwater conveyance system - o Establishing procedures for prompt maintenance and repair of equipment that may result in leaks and spills	Project Measure	No Adverse Effect - Operational best management practices and runoff and pollution control measures would be implemented to protect water quality

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
Electric Power	Amount of electricity consumed for operations would be less than the projected future capacity of electricity supplies available	No avoidance, minimization, or mitigation measures needed	None	No Adverse Effect
Natural Gas	Light rail transit guideway and stations would not consume natural gas	No avoidance, minimization, or mitigation measures needed	None	No Adverse Effect
Telecommunication	Operations would not require notable expansion of an existing facility or construction of a new facility	No avoidance, minimization, or mitigation measures needed	None	No Adverse Effect
Solid Waste	The disposal of solid waste from waste and recycle bins would have no notable potential to affect landfill capacity or impair attainment of solid waste reduction goals	No avoidance, minimization, or mitigation measures needed	None	No Adverse Effect

Source: Metro; CDM Smith/AECOM JV 2026.

3.17 Construction

This section evaluates the construction effects from the No Build Alternative and the Build Alternative. The analysis incorporates data from the following technical reports: **Appendix E** (Alternatives Considered and Project Description), **Appendix F** (Air Quality Impacts Report), **Appendix G** (Biological Resources Database Search Results), **Appendix H** (Community Impacts Assessment), **Appendix I** (Economic and Fiscal impacts Reports); **Appendix J** (Hazardous Materials Impacts Report), **Appendix K** (Historic, Archeological and Tribal Resources Technical Report), **Appendix L** (Noise and Vibration Impacts Report), **Appendix M** (Real Estate and Acquisition Impacts Report), and **Appendix O** (Transportation Impacts Report).

The assessment of reasonably foreseeable effects in this section is based upon the temporal and geographic proximity parameters detailed in **Chapter 3.0** (Introduction). Regarding temporal scope, this construction section specifically analyzes temporary effects that are expected to occur during Build Alternative construction, which is anticipated to last approximately 60 to 84 months. Long-term effects are discussed in **Section 3.2** through **Section 3.16** of the EA. Regarding geographic proximity, most resource topics rely on the Study Area defined in **Chapter 3.0**, unless they use specialized study areas defined in the resource-specific section of the EA (**Section 3.2** through **Section 3.16**).

3.17.1 Affected Environment

The Study Area is an urbanized area that is largely built-out and includes a diverse mix of land uses and densities, including single and multi-family residences, commercial and retail uses, industrial development, parks, and public and community facilities, such as schools and the East Los Angeles Civic Center. For some resource topics, specialized study areas have been developed that differ from the Study Area to include the geographical extents that may be affected by construction activities associated with the Build Alternative. Regulations applicable to construction are summarized in **Appendix S** (Regulatory Setting Summary) and detailed in for specific resource topics in **Appendix F**, **Appendix H**, **Appendix I**, **Appendix J**, **Appendix K**, **Appendix L**, **Appendix M**, and **Appendix O**.

3.17.1.1 No Build Alternative

The No Build Alternative, as described in **Section 2.2** (No Build Alternative) of the EA, would include already planned and funded roadway and transit projects but would not provide a rail transit option for communities in eastern Los Angeles County. Under the No Build Alternative, no construction of additional light rail transit infrastructure would occur within the Study Area. Overall, as shown in **Table 3.17-1**, the No Build Alternative would not require construction outside of already planned transit and roadway projects and would not result in an adverse effect related to construction.

Table 3.17-1 Construction Impact Summary – No Build Alternative

Topic	Impact	Rationale
Construction	No Adverse Effect	- Construction of already planned transit and roadway projects within the region would comply with federal, state, and local regulations and standards protecting environmental and historic resources, human health and safety, and infrastructure. - Each of the projects that would be built under the No Build Alternative would be required to undergo separate environmental reviews to determine the individual project's short-term construction effects and mitigation, as necessary. - The projects under the No Build Alternative would primarily be constructed within developed and paved areas with limited to no natural areas and would not result in a substantial change in impervious surface.

Source: Metro; CDM Smith/AECOM JV 2026.

3.17.1.2 Build Alternative

The Build Alternative would consist of approximately 4.7 miles of reconfigured and new light rail transit guideway to extend the Metro E Line, a light rail transit line, from its current terminus at the Atlantic Station in East Los Angeles (unincorporated Los Angeles) to the Cities of Commerce and Montebello. The 4.7 miles would include reconfiguration of 0.4 mile of existing track to transition to a new 4.3 mile extension.

Construction of the Build Alternative would comply with applicable Metro policies, Metro Rail Design Criteria, standards, local regulations, and permits that would be obtained to perform the construction. Metro's contractor would establish construction quality and safety programs for the Build Alternative. Metro uses a quality management process that ensures Build Alternative elements are built as designed by the Engineer of Record and are compliant with the construction standards set forth by the Metro Rail Design Criteria, building codes, and regulatory frameworks. Metro's contractor would establish a construction safety program that would, at minimum, conform to the provisions set forth by Metro Construction Safety Policies, federal Occupational Safety and Health Administration, and California Occupational Safety and Health Administration. Project engineering and construction would, at minimum, be completed in conformance with the regulations, guidelines, and criteria specified in **Appendix S**.

3.17.1.2.1 Construction Activities

Before the start of construction, geotechnical and hazardous material field surveys would be conducted to identify soil conditions and any potential hazards related to the Build Alternative's design and construction. Construction would start with site preparation. Once the site is cleared, utilities (such as water, power, and telecommunications lines) that conflict with the Build Alternative would either be relocated or protected in place. The Build Alternative would require the installation of a power line to provide electrical power to the tunnel boring machine. The line would connect to an existing Southern California Edison power substation and extend to the proposed tunnel boring machine launch site, which would also be the location of MSF Site 3. Beginning at the existing Southern California Edison substation at Yates Avenue and north of Flotilla Street, the underground line would proceed south on Yates Avenue to Washington Boulevard, turn west on Washington Boulevard, and then terminate at the tunnel boring machine launch site. The underground trench would be excavated about 20 feet deep with maintenance holes every few hundred feet. Trench lines would be supported with support excavation in conformance with federal and California Occupational Safety and Health Administrations and covered with steel plates to maintain traffic use. If needed, temporary roadway reconfiguration or restriping would be carried out to accommodate the work while keeping traffic moving. Metro would coordinate relocations, modifications, and protection-in-place with all potential utilities affected under the terms of each provider's franchise or other agreements defining the provisions for such matters.

Key construction activities associated with the guideway construction (including at-grade, aerial, and underground) would include tunnel boring and temporary roadway decking (i.e., temporary deck slabs placed above an excavation so traffic can continue above while construction work happens) for the cut and cover sections. Additional activities would include underground and at-grade station construction, demolition, utility relocations, street improvements (such as sidewalk reconstruction and traffic signal installation), construction of the aerial structure and retaining walls, and the installation of light rail transit operating systems, including traction power substations and overhead catenary systems. The Build Alternative would also include the construction of a parking facility, other railroad system facilities, the Maravilla Crossover and other crossovers along the alignment, potential street widening, and the MSF. Construction of aerial structures would generally occur in stages, including installation of foundation piles, reinforced concrete columns, and placement of the superstructure, which may require temporary falsework to support formwork and loads during construction. Utility relocation work would generally occur within the affected right-of-way and on adjacent and nearby streets.

The tunnel boring machine would be launched from the southern tunnel portal near Saybrook Avenue and Gayhart Street (west of Washington Boulevard). Work at this site would include cut and cover excavation, installing temporary support structures (shoring), large-scale soil removal (mass excavation), and hauling excavated material (spoils) away by truck. The tunnel boring machine would then excavate the first tunnel north towards the excavation pit located at East of Atlantic Boulevard between Repetto Avenue and 4th Street. The tunnel boring machine would be turned at the excavation pit and relaunched towards the launch pit to bore the second tunnel. The tunnel boring machine would be disassembled and lifted from the launch pit.

The cut and cover method would also be used east of Atlantic Boulevard in a north-south orientation, starting north of East 4th Street and then transitioning to an east-west orientation along Beverly Boulevard and 3rd Street. The cut and cover would end on 3rd Street between Woods Avenue and La Verne Avenue where the tunnel connects to existing tracks. Limits of the cut and cover at and near the Atlantic/Pomona station can be seen in **Figure 2.4** and **Figure 2.14** in **Chapter 2.0** (Description of Alternatives). Cut and cover activities would deck portions of existing roadways that support live traffic. Such activities would occur at Atlantic Boulevard between Beverly Boulevard and Pomona Boulevard (east of the proposed Atlantic Pomona station), and east of Atlantic Boulevard at Beverly Boulevard, Via Corona Street, Repetto Avenue, and 4th Street (see **Figure 2.14** in **Chapter 2.0**).

Tunnel boring is expected to advance at least 30 feet per day and may occur at the same time as at-grade and aerial construction along Washington Boulevard. Station construction would take place simultaneously with guideway work. Afterward, track installation and light rail transit operating systems (including overhead catenary system, overhead conductor rail, traction power substation, and train control facilities) would be completed, followed by station art, final street improvements, and landscaping.

The Build Alternative may utilize the Interstate 5 freeway as a haul route during construction activities. Consistent with local plans, truck routes that may be used for transporting and hauling construction-related materials include Washington Boulevard, Atlantic Boulevard, Whittier Boulevard, Saybrook Avenue, Gayhart Street, Telegraph Road, Paramount Boulevard, Rosemead Boulevard, Slauson Avenue, Smithway Street, Vail Avenue, Yates Avenue, and Greenwood Avenue. For the twin bore tunnel, tunneling would generate an average of about 1,000 cubic yards of soil from each bored tunnel each day.

For additional details on construction for the Build Alternative refer to **Appendix E** (Alternatives Considered and Project Description) of this EA.

3.17.1.2.2 Construction Timing

The construction activities for the Build Alternative are expected to last 60 to 84 months. Most construction activities would occur during daytime hours. For specialized construction tasks (i.e., underground excavation and station construction, tunnel boring machine tunneling, and installation of support columns and road decking for cut and cover structures), it is common to work during both daytime and nighttime hours. Other disciplines, such as utility work, roadway work, and cut-and-cover, may require nighttime construction to minimize traffic disruptions. Construction work during nighttime hours would be conducted with a variance from nighttime ordinances that would include community input, which would include advanced coordination with stakeholders and notifications within the affected community. Traffic and pedestrian control measures during construction would follow local jurisdiction guidelines and California Manual on Uniform Traffic Control Devices standards. Industry standard roadway construction traffic control methods and devices would be followed including the use of signage and barricades to regulate, warn, or guide road users. Refer to **Appendix O** for more information.

Table 2-5 in **Chapter 2.0** provides a description of typical construction activities to support light rail transit construction, describing the activity, typical duration, and equipment required. This table summary is meant to be representative, not all inclusive.

3.17.2 Construction Effects, Avoidance, Minimization, and Mitigation Measures for the Build Alternative

Table 3.17-2 summarizes the effects associated with construction activities under the Build Alternative on resource topics and references avoidance, minimization, and mitigation measures. As shown in **Table 3.17-3**, because of compliance with existing regulations and NPM and NMM (where applicable), construction of the Build Alternative would have no short-term adverse effects. **Table 3.17-3** provides the full text of the avoidance, minimization, and mitigation measures that would be implemented for construction activities.

Table 3.17-2 Short-Term Construction Effects of the Build Alternative

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Air Quality (Construction Emissions)	Fugitive dust engine exhaust, and area emissions during construction activities were estimated for all components of the Build Alternative, including trenching tunnel boring machine power infrastructure, construction of stations and parking facility for the Greenwood station, rail lines, and the MSF (including MSF Site 1, 2, or 3). Construction-related emissions would be temporary (approximately 60 to 84 months), and neither the maximum total regional daily emissions nor the peak localized daily emissions would exceed the South Coast Air Quality Management District's regional construction emissions thresholds or localized significance thresholds. Areas of localized construction emissions would change during the construction period. Construction would not be expected to result in emissions in any one location for 5 years or more; thus, under Environmental Protection Agency Transportation Conformity particulate matter Hot-Spots guidance, construction emissions would not be expected to meaningfully affect long-term ambient concentrations and no quantitative particulate matter hot spots analysis is required. No adverse effect would occur. See Appendix F for more detailed analysis of construction effects. On March 24, 2026, the Transportation Conformity Working Group determined that the Build Alternative is not a Project of Air Quality Concern and would not have adverse impacts on air quality. The Build Alternative meets the requirements of the Clean Air Act and 40 CFR 93.116.	No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction effects on this resource.	No Adverse Effect
Biological Resources (Federally listed species)	As discussed in Section 3.3 (Biological Resources), the Biological Resources Study Area is highly developed and does not support habitat or critical habitat for federally listed species. There would be no effect.	No Effect	No avoidance, minimization, or mitigation measures are needed to address construction effects on this resource.	No Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Biological Resources (Migratory Birds)	Street trees and landscape vegetation could be affected by construction and maintenance activities during the 3-year tree establishment maintenance period. If vegetation disturbance occurs during the bird nesting season, it could adversely affect migratory birds by disrupting nesting activities. The Build Alternative would comply with the Migratory Bird Treaty Act, Metro's tree policy, and tree protection policies of the corridor jurisdictions, which include provisions for tree protection and replanting during construction. Implementation of NMM BIO-1, which requires nesting bird surveys and avoidance of active nests during the bird nesting season, would reduce adverse effects on migratory birds during construction and the 3-year tree establishment maintenance period.	Adverse Effect	NMM BIO-1 - Nesting Birds	No Adverse Effect
Biological Resources (Vegetation)	Street trees and landscape vegetation could be affected by construction activities but Metro would comply with its tree policy and local tree protection policies, which include provisions for tree protection and replanting during construction, and care of planted trees during the 3-year tree establishment maintenance period.	No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction effects on this resource.	No Adverse Effect
Biological Resources (Invasive species and pathogens)	Equipment for construction activities has the potential to transport invasive plant seeds in areas of exposed soil and spread tree disease pathogens. The Biological Resources Study Area is primarily built out with minimal landscaping, isolated street trees, and no vegetation communities. Thus, there would be limited potential to spread invasive species and tree disease pathogens.	No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction effects on this resource.	No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Community Impacts (Neighborhood Continuity)	Construction could result in temporary impacts to local businesses near construction areas. However, Metro has several programs that provide financial assistance and marketing assistance to small businesses along rail corridors under construction. Temporary traffic delays would occur near construction staging areas. Construction best management practices as set forth in NPM TRA-2 would minimize these short-term disruptions to the corridor jurisdictions. As set forth in NPM TRA-4, site access to the MSF and adjacent properties would be retained and adhere to design requirements. However, there would be an adverse effect due to reduced access within the corridor jurisdictions, which could lower quality of life and increase community isolation. Implementation of NMM TRA-2, which would require that access to important community facilities and neighborhood areas are maintained, would reduce this effect to not adverse. Construction of the Build Alternative and MSF would result in temporary employment opportunities. Construction workers for the Build Alternative and the MSF would likely be sourced from the existing local labor pool and would not result in new workers relocating to the area. Thus, construction of the Build Alternative and MSF would not require the construction of new housing and would therefore not induce unplanned growth. Construction-related air quality emissions would not exceed South Coast Air Quality Management District's regional construction emissions thresholds levels (see Appendix F). Construction-related noise and vibrational impacts would be reduced with implementation of measures identified in NPM NOI-2 and adverse effects would be reduced to not adverse with implementation of NMM NOI-1 through NMM NOI-10, NMM NOI-13, and NMM NOI-14, as discussed in the following construction noise analysis and in Appendix L. See Appendix H, for more detailed analysis of construction effects.	Adverse Effect	NPM NOI-2 - Construction Noise and Vibration Control NPM TRA-2 - Construction Best Management Practices for Transportation NPM TRA-4 - Construction Best Management Practices for the Maintenance and Storage Facility Regarding Transportation NMM NOI-1 - Construction Noise Plan and Noise Monitoring Plan NMM NOI-2 - Cast-in-Drilled-Hole Construction Methodology NMM NOI-3 - Noise Barriers NMM NOI-4 - Construction Staging Area NMM NOI-5 - Haul Routes NMM NOI-6 - Best Available Control Technologies NMM NOI-7 - Construction Working Hours NMM NOI-8 - Public Notification of Construction Operations and Schedules NMM NOI-9 - Truck Staging NMM NOI-10 - Tunnel Vent Fans Away From Residences NMM NOI-13 - Identify Vibration Susceptible Properties NMM NOI-14 - Vibration Pre-Construction Survey and Control Plan NMM TRA-2 - Traffic Management Plan	No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Community Impacts (Physical Character)	Street closures would potentially physically divide established communities. However, street closures would be periodic and temporary. Construction best management practices as set forth in NPM TRA-2 would minimize disruptions. However, there would be an adverse effect due to street closures potentially physically dividing established communities. These adverse effects would be reduced to not adverse with implementation of NMM TRA-2, which would minimize street closure disruptions during construction and maintain access within and between established communities. Temporary construction easements would be required. Metro would provide relocation services and payments to displaced businesses. After construction, properties would likely return to their original use. No residences, churches, schools, parks, or other sensitive land uses would be permanently acquired. MSF: The MSF would be primarily on existing parcels designated for industrial uses that are spatially separated from community facilities and residential neighborhoods. Construction of the MSF would require temporary changes to traffic circulation and controls. As set forth in NPM TRA-4, site access to the MSF and surrounding properties would be retained and meet design requirements during construction. See Appendix H for more detailed analysis of construction effects.	Adverse Effect	NPM TRA-2 - Construction Best Management Practices for Transportation NPM TRA-4 - Construction Best Management Practices for the Maintenance and Storage Facility Regarding Transportation NMM TRA-2 - Traffic Management Plan	No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Community Impacts (Access and Mobility)	Temporary and periodic street and sidewalk closures would be required during construction activities. As set forth in NPM TRA-2, lane and/or road closures would be scheduled to minimize disruptions to circulation patterns. However, there would be an adverse effect due to street closures impacting access and mobility within and between communities. With implementation of NMM TRA-2, the Traffic Management Plan specifies measures to minimize disruption to access and mobility during construction and would require that access to important community facilities and neighborhood areas are maintained and reduce adverse effects. MSF Site 1: Closure of Acco Street and other temporary changes to traffic circulation and control would be required. As set forth in NPM TRA-4, access to nearby properties would be maintained and alternative routes would be available for any streets requiring closure. However, there would be an adverse effect due to street closures impacting access to these properties. NMM TRA-2 specifies measures to minimize disruption to access and mobility during construction and would reduce adverse effects to not adverse. MSF Site 2: Reduced access on Yates Avenue and other temporary changes to traffic circulation and controls would be required. Access would be maintained to nearby properties and disruptions minimized using measures set forth in NPM TRA-4. With implementation of NMM TRA-2, adverse effects associated with street closures would be reduced to not adverse. MSF Site 3: Construction would not require the closure of any primary vehicle routes. See Appendix H for more detailed analysis of construction effects.	Adverse Effect	NPM TRA-2 - Construction Best Management Practices for Transportation NPM TRA-4 - Construction Best Management Practices for the Maintenance and Storage Facility Regarding Transportation NMM TRA-2 - Traffic Management Plan	No Adverse Effect
Community Impacts (Parks)	Intermittent increases in noise, dust, odors, and traffic delays would occur during construction, which could affect adjacent parks. However, as discussed in Appendix F, Appendix L, and Appendix O, these impacts would not be adverse with implementation of standard control measures and noise and vibration mitigation measures. Implementation of NPM TRA-2 would minimize disruptions to the public caused by temporary closures. However, there would be an adverse effect due to intermittent closures and detours during construction, which could inhibit access to parks. Implementation of NMM TRA-2 would maintain mobility and access to local facilities and reduce adverse effects to not adverse. See Appendix H for more detailed analysis of construction effects.	Adverse Effect	NPM TRA-2 - Construction Best Management Practices for Transportation NMM TRA-2 - Traffic Management Plan	No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Community Impacts (Multi-Use Trails)	Construction traffic could potentially delay access to the multi-use trails from Washington Boulevard. As set forth in NPM TRA-2, Metro standard practices shall include timing closures to minimize disruptions to the public. However, there would be an adverse effect due to street closures inhibiting access to multi-use trails. Implementation of NMM TRA-2 would require development of a Traffic Management Plan to maintain mobility and access to local facilities, which would reduce adverse effects to not adverse. See Appendix H for more detailed analysis of construction effects.	Adverse Effect	NPM TRA-2 - Construction Best Management Practices for Transportation NMM TRA-2 - Traffic Management Plan	No Adverse Effect
Community Impacts (Other Community Facilities)	Construction traffic could potentially result in traffic delays and thus hinder access to other community facilities. As identified in NPM TRA-2, Metro standard practices shall include timing closures to minimize disruptions to the public. However, there would be an adverse effect due to street closures inhibiting access to other community facilities. Implementation of NMM TRA-2 would require development of a Traffic Management Plan to maintain mobility and access to local facilities, which would reduce adverse effects to not adverse. MSF: Closure of Acco Street for MSF Site 1 and reduced access on Yates Avenue for MSF Site 2 would be required. Construction of MSF Site 3 would not require the closure of any primary vehicle routes. Access to nearby properties would be maintained, and alternative routes would be available for any streets requiring a closure as set forth in NPM TRA-4. However, there would be an adverse effect due to street closures inhibiting access to other community facilities. As required by NMM TRA-2, a Traffic Management Plan would maintain mobility and access to local facilities, which would reduce adverse effects to not adverse. See Appendix H for more detailed analysis of construction effects.	Adverse Effect	NPM TRA-2 - Construction Best Management Practices for Transportation NPM TRA-4 - Construction Best Management Practices for the Maintenance and Storage Facility Regarding Transportation NMM TRA-2 - Traffic Management Plan	No Adverse Effect

Historic, Archaeological, and Tribal Resources (Historic Properties)	Construction activities would not destroy, damage, alter, move, or result in the neglect or deterioration of the historic properties. The physical features within each property's setting that contribute to its historic significance would not change. The construction of new visual elements of the Build Alternative (e.g., the aerial structure) would be congruent with the surrounding industrial setting and would not diminish features of the historic properties. Effects on specific properties are summarized below and discussed in more detail in Appendix K. <u>National Chicano Moratorium March:</u> Construction would remove and replace asphalt pavement along portions of the historic district's contributing march route at East 3rd Street, East Beverly Boulevard, Atlantic Boulevard, and Whittier Boulevard. A trench would be installed within the existing right-of-way at 3rd Street and La Verne Avenue where the alignment would transition underground. These activities would be temporary and would not result in a permanent alteration to the historic property. Additional curb ramps would be installed at intersections where non-historic post-1970 curb ramps already exist. The Build Alternative would not result in the reconfiguration of the streets and sidewalks that contribute to the significance of the historic district's linear route. While the Build Alternative would include street and sidewalk improvements, the National Chicano Moratorium March route would be maintained, and improvements would be made using matching materials (asphalt). The district's use would not change, nor would the physical features within the property's setting contribute to its historic significance. None of the district's character-defining features or contributing elements, such as the National Chicano Moratorium March route, El Barrio Free Clinic, Silver Dollar Café, or Ruben Salazar Park, would be demolished or altered. Therefore, the Build Alternative would have no adverse effect on the National Chicano Moratorium March route. <u>Golden Gate Theater:</u> Construction of the guideway and station has the potential to cause vibrations and ground settlement that could impact the Golden Gate Theater, resulting in an adverse effect. Implementation of NMM CUL-1 would require building protection measures to be put in place, such as ground improvements and/or use of lower vibration-generating construction equipment, as identified in a pre-construction survey. NMM CUL-1 would reduce the potential for vibration-related adverse effects generated during construction activities to damage the Golden Gate Theater, and there would be no adverse effect. <u>Vail Field Industrial Addition historic district:</u> Demolition of six contributors to the historic district would occur during construction. As discussed in Section 3.5 and Appendix K, this would not alter the district's character defining features and the core of the historic district would have characteristics to convey its historical significance. Therefore, the Build Alternative would have no adverse effect on the Vail Field Industrial Addition historic district.	Adverse Effect	NMM CUL-1 - Protection Measures – Differential Settlement/Vibration/Tunnel Boring Machine [TBM] Specifications for CVS Pharmacy [CVS]/Golden Gate Theater	No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
	<u>Pacific Metals Company:</u> Construction of the Build Alternative would introduce a new visual element but would not change the historic character of the building. The aerial guideway, while conspicuous, would be congruent with other railway infrastructure in the area. The Build Alternative would have no adverse effect on Pacific Metals Company building. <u>MSF Site 2:</u> Under MSF Site 2, construction of the aerial guideway would intersect the southeastern corner of Pacific Metals Company building parcel where the existing parking lot is located; however, this would not adversely alter the façade of the Pacific Metals Company building or diminish the integrity of the building's significant features. There would be no adverse effect on Pacific Metals Company building. The E.F. Hauserman Company building would be within the vicinity of MSF Site 2. MSF Site 2 would introduce a new visual element but would not change the historic character of the building. Construction activities would not materially impair the historic property due to the distance from MSF Site 2 and its tail tracks. MSF Site 2 would have no adverse effect on historic properties. <u>MSF Site 3:</u> MSF Site 3 would be located within the Vail Field historic district. Construction activities for the MSF would introduce a new visual element, but the they would be consistent with the industrial nature of the historic district and would not have an adverse effect. See Appendix K for more detailed analysis of construction effects.			
Historic, Archaeological, and Tribal Resources (Archaeological Resources)	Construction would not have a reasonably foreseeable effect on known archaeological resources within the Area of Potential Effects (APE). However, construction could have the potential to disturb and destroy archaeological resources that are currently unknown. NMM CUL-2 requires that construction workers receive training on how to proceed if cultural resources are inadvertently discovered, and that a Cultural Resources Monitoring and Mitigation Plan be prepared for unanticipated discoveries. Implementation of this mitigation would reduce adverse effects on archaeological resources to not adverse. The tunnel boring machine does not allow for discovery of intact archaeological resources because of the method of construction. However, ground disturbance during tunnel boring would occur in deep soil levels that are too old, generally older than 15,000 years before present, to be available for human occupation. Therefore, they are unlikely to contain buried resources. See Appendix K for more detailed analysis of construction effects.	Adverse Effect	NMM CUL-2 - Unknown Archaeological Resources	No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Historic, Archaeological, and Tribal Resources (Traditional Cultural Properties [TCPs])	No precontact archaeological sites were identified through research, survey, and Native American consultation in the APE; therefore, precise locations with a higher potential to contain such resources cannot be identified. If unmitigated, there could be a potential disturbance of Traditional Cultural Places that are currently unknown during construction, resulting in an adverse effect. Implementation of NMM TCP-1, NMM TCP-2, and NMM TCP-3 would ensure that workers have a clear understanding of Traditional Cultural Places that may be present in the construction area, and that procedures and plans would be in place for monitoring for and for safely handling Traditional Cultural Places. Implementation of NMM TCP-1 through NMM TCP-3 would reduce adverse effects to not adverse. The tunnel boring machine does not allow for discovery of intact archaeological resources because of the method of construction. However, ground disturbance during tunnel boring would occur in deep soil levels that are too old, generally older than 15,000 years before present, to be available for human occupation. Therefore, they are unlikely to contain buried resources. See Appendix K for more detailed analysis of construction effects.	Adverse Effect	NMM TCP-1 - Traditional Cultural Places [TCP] Training NMM TCP-2 - Retain a Native American Monitor NMM TCP-3 - Unknown Traditional Cultural Places [TCP]	No Adverse Effect
Economic Impacts (Capital Expenditures)	The gross capital expenditures for construction of the Build Alternative relative to the No Build Alternative are estimated to be \$5.889 billion (2022 dollars). Capital expenditure categories include general construction (\$3.612 billion); vehicles (\$91.8 million); right-of-way, land, and existing improvements (\$903 million); soft costs/professional services (\$745 million); and unallocated contingency (\$536 million). General construction and soft costs/professional services are the two types of capital expenditures that may potentially affect the local economy. Construction-related goods and services would largely be purchased within the local economy. Soft costs/professional services are produced within and purchased from the local economy and therefore have a local economic effect. Because these capital expenditures would generate investment in the local economy, there would be a beneficial economic effect.	No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction effects on this resource.	Beneficial Effect
Economic Impacts (Capital Funding Sources)	Although the amount of new or federal funding sources is not known, the economic effects associated with construction spending are estimated using the total project cost minus the \$3 billion from Measure M allocated to the Build Alternative (Metro 2025b). Because Measure M funding is restricted to projects specified in the Expenditure Plan, these funds would generate regional economic activity through some Expenditure Plan project regardless of whether this specific project is approved. The incremental economic benefit attributable to the Build Alternative, therefore, comes from external funding sources that would not otherwise enter the economy. Therefore, there would be a beneficial economic effect.	No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction effects on this resource.	Beneficial Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Economic Impacts (Capital Expenditure Effects on the Economy)	Construction of the Build Alternative would represent a substantial capital investment in the economy that would increase employment, earnings, and economic output during the construction period. Regional Input-Output Modeling System II multipliers were used to translate capital expenditures into the associated job and income effects. Construction activities would generate 11,679 person-year jobs for Los Angeles County and 12,932 person-year jobs for the Los Angeles-Long Beach-Santa Ana Metropolitan Statistical Area. Because these capital expenditures would generate employment in Los Angeles County and the Los Angeles-Long Beach-Santa Ana Metropolitan Statistical Area during the construction period (approximately 60 to 84 months), they would provide beneficial economic effects.	No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction effects on this resource.	Beneficial Effect
Economic Impacts (Pilot Local Hire Initiative Effects)	Under the Metro Pilot Local Hire Initiative, Metro's Project Labor Agreement and Construction Careers Policy, local hire provisions would be instituted regardless of the funding source of the Project. As a result, all contractors working on Metro construction projects covered by the Pilot Local Hire Initiative and Construction Careers Policy would be required to comply with the targeted hiring requirements, as set forth in NPM EFI-1. The Pilot Local Hire Initiative would result in an increase in employment for Community Area Residents (3,584 hires), workers from within Los Angeles County (896 hires), and local target workers (apprentice) (896 hires). Therefore, the Build Alternative would generate employment; there would be a beneficial economic effect.	No Adverse Effect	NPM EFI-1 - Metro Joint Development Program and Metro Pilot Local Hiring Initiative	Beneficial Effect
Economic Impacts (Localized Temporary Effects on Businesses)	Construction activities could have temporary adverse economic effects on some commercial and industrial businesses, particularly near or adjacent to construction sites, including traffic disruption and air quality and noise effects. These construction effects could result in a loss of sales and/or increased operating costs for commercial businesses. While some individual businesses would have adverse effects, these businesses represent a relatively small portion of the overall regional economy. Therefore, the overall effect on the region is expected to be minor and there would be no adverse effect on the region.	No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction effects on this resource.	No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Geology, Soils and Paleontological Resources (Exposure to Seismic Hazards)	As identified in NPM GEO-1, construction would comply with the Metro Rail Design Criteria, which includes detailed requirements for planning and conducting a geotechnical investigation, geotechnical design methodologies, and reporting, such as the preliminary geotechnical investigation conducted in 2025 that included 108 explorations within the Study Area. Specific structural engineering recommendations identified in the geotechnical investigations required under NPM GEO-1 would be incorporated into the final design plans consistent with standard practice. The Build Alternative would also comply with California Department of Transportation design criteria for aerial structures and the Los Angeles County Building Code requirements for structures as set forth in NPM GEO-1. Thus, there would be no adverse effect.	No Adverse Effect	NPM GEO-1 - Geotechnical Investigation	No Adverse Effect
Geology, Soils and Paleontological Resources (Soil Erosion)	The implementation of erosion control best management practices as identified in NPM HWQ-2 would prevent substantial soil erosion or the loss of topsoil from exposed soils during construction. At the close of construction, areas of exposed soil that were previously paved would be repaved. Thus, there would be no adverse effect.	No Adverse Effect	NPM HWQ-2 - Construction Best Management Practices for Water Resources	No Adverse Effect
Geology, Soils and Paleontological Resources (Soil Stability)	Construction would comply with regulatory requirements, as described in NPM GEO-1, and recommendations in a site-specific geotechnical investigation to avoid adverse effects from soil stability, including related to excavation and tunneling and dewatering. Thus, there would be no adverse effect.	No Adverse Effect	NPM GEO-1 - Geotechnical Investigation	No Adverse Effect
Geology, Soils and Paleontological Resources (Expansive Soils)	Construction would comply with regulatory requirements, as described in NPM GEO-1, and recommendations in a site-specific geotechnical investigation to avoid adverse effects from expansive soil. Thus, there would be no adverse effect.	No Adverse Effect	NPM GEO-1 - Geotechnical Investigation	No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Geology, Soils and Paleontological Resources (Paleontological Resources)	As discussed in Section 3.7 (Geology, Soils, Seismic and Paleontological Resources), the findings of fossil locality searches conducted by the Natural History Museum of Los Angeles County in 2019 provide an assumption that soils included in the Study Area are associated with old alluvial fan sediments and could be categorized as high paleontological potential. Potential damage or loss of paleontological resources could occur during tunnel construction with the use of tunnel boring machines which would likely prevent the discovery of fossil resources. Inadvertent discovery protocols and fossil recovery measures would help preserve the scientific value of fossils that may be present in these areas (NMM GEO-1 through NMM GEO-4). In addition, a review of published and unpublished literature of known paleontological resources was conducted to determine if there is a presence of paleontological resources. The literature search yielded no records of fossil localities near the Build Alternative. With implementation of NMM GEO-1 through NMM GEO-4, the potential adverse effects on paleontological resources during construction would be reduced to not adverse.	Adverse Effect	NMM GEO-1 - Retaining a Qualified Paleontologist and a Qualified Paleontological Monitor NMM GEO-2 - Ability to Readily Salvage Fossils and Samples of Sediment NMM GEO-3 - Ability to Identify and Permanently Preserve Specimens NMM GEO-4 - Ability to Curate Specimen to a Professional Accredited Museum Repository	No Adverse Effect
Visual Resources (Scenic Vistas)	Construction activities would not substantially obstruct views of the San Gabriel Mountains, Puente Hills, or downtown Los Angeles skyline. Any obstruction associated with construction equipment, temporary structures, or demolition activities would be temporary, intermittent, and localized, and limited to the immediate construction area. Long-range views would remain largely available from surrounding public locations during construction.	No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction effects on this resource.	No Adverse Effect
Visual Resources (Visual Character and Quality)	Construction activities would result in temporary visual changes associated with building demolition, excavation, construction equipment, staging areas, and temporary surface disturbances. These changes would be most noticeable near locations where existing commercial parcels are acquired and demolished to accommodate new stations, station plazas, surface parking, electrical equipment, or MSF facilities. Although demolition would temporarily alter the visual character of these parcels, such changes would be short term and transitional in nature. Construction staging areas would be fenced, screened where feasible, and managed to minimize visual nuisance and avoid substantial degradation of visual character and quality in adjacent areas. Dust control measures required under South Coast Air Quality Management District Rule 403 would reduce visible dirt and dust on public roadways and nearby properties. Overall, while construction would introduce temporary visual contrast within the corridor, these effects would not result in a substantial or long-term degradation of the visual environment.	No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction effects on this resource.	No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Hazardous Materials (Transportation, Storage, Use and Disposal of Hazardous Materials)	The Build Alternative could expose the public or the environment to hazardous materials from the use of typical construction equipment and vehicles containing fuel, oil, and grease; hazardous building materials such as asbestos and lead based paint that could be encountered during demolition; and the use and transport of limited quantities of certain hazardous materials such as paints, solvents, and glues used during construction. NPM HAZ-2, NPM HAZ-4, and NPM HAZ-5 would implement construction best management practices for Hazardous materials. NMM HAZ-2 - Soil and Groundwater Management Plan would address potential handling and disposal of contaminated soil and groundwater, NMM HAZ-3 – Metro’s Contractor Specifications would provide guidance if soil and groundwater contamination is encountered, NMM HAZ-4 - Safety Manuals and Construction Work Plans would address worker health and safety and NMM HAZ-5 - Hazardous Building Survey and Abatement would require investigation into building materials or equipment that contains hazardous materials. Compliance with NMM HAZ-2 through NMM HAZ-5 to reduce adverse effects related to the use and/or storage of hazardous materials, transport of hazardous materials, and disposal of hazardous waste to no adverse effect. See Appendix J for more detailed analysis of construction effects.	Adverse Effect	NPM HAZ-2 - Construction Best Management Practices for Hazardous Materials NPM HAZ-4 - Construction Best Management Practices for Maintenance and Storage Facility for Hazardous Materials NPM HAZ-5 - Construction Best Management Practices for Commerce/Citadel station for Hazardous Materials NMM HAZ-2 - Soil and Groundwater Management Plan NMM HAZ-3 – Metro’s Contractor Specifications NMM HAZ-4 - Safety Manuals and Construction Work Plans NMM HAZ-5 - Hazardous Building Survey and Abatement	No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Hazardous Materials (Release of Hazardous Materials)	While it is anticipated that construction of the Build Alternative would not create a significant hazard to the public or the environment involving the release of hazardous materials into the environment, this construction analysis presents the potential possibilities of such a risk. Potentially affected parcels may have subsurface contamination from undocumented releases associated with historical use of the property (see Table 3.9-1, Affected Properties with Previous Document Releases). Construction of the Build Alternative would require grading and tunneling activities that would potentially expose construction workers and the public to hazardous conditions through disturbance of contaminated soil and/or groundwater. The FONSI would include a formal commitment to remediate affected sites to State regulatory standards for its intended use. Phase II ESA findings may necessitate a re-evaluation or supplemental environmental review. NMM HAZ-1 would require an investigation into potential soil and ground contamination. NMM HAZ-2 - Soil and Groundwater Management Plan would address potential handling and disposal of contaminated soil and groundwater, NMM HAZ-3 – Metro’s Contractor Specifications would provide guidance if soil and groundwater contamination is encountered, NMM HAZ-4 - Safety Manuals and Construction Work Plans would address worker health and safety and NMM HAZ-5 - Hazardous Building Survey and Abatement would require investigation into building materials or equipment that contains hazardous materials. The Build Alternative would adhere to existing federal and state regulations related to hazardous materials and implement NMM HAZ-1 through NMM HAZ-5 and would have no adverse effect. See Appendix J for more detailed analysis of construction effects.	Adverse Effect	NMM HAZ-1 - Phase I Environmental Site Assessment [ESA] and Phase II ESA NMM HAZ-2 - Soil and Groundwater Management Plan NMM HAZ-3 - Metro’s Contractor Specifications for Hazardous Materials NMM HAZ-4 - Safety Manuals and Construction Work Plans NMM HAZ-5 - Hazardous Building Survey and Abatement	No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Hazardous Materials (Hazardous Materials Sites)	Disturbance of existing soil contamination from hazardous materials release sites or other sources could pose a health risk to construction workers, the public, and/or the environment if not characterized, handled, and disposed of properly, and therefore would result in an adverse effect. NPM HAZ-4 and NPM HAZ-5 would implement construction best management practices for the Build Alternative. NMM HAZ-1 would require an investigation into potential soil and ground contamination. NMM HAZ-2 - Soil and Groundwater Management Plan would address potential handling and disposal of contaminated soil and groundwater, NMM HAZ-3 – Metro’s Contractor Specifications would provide guidance if soil and groundwater contamination is encountered, NMM HAZ-4 - Safety Manuals and Construction Work Plans would address worker health and safety and NMM HAZ-5 - Hazardous Building Survey and Abatement would require investigation into building materials or equipment that contains hazardous materials. Construction would adhere to existing federal and state regulations related to hazardous materials as set forth in NPM HAZ-4 and NPM HAZ-5 and would implement NMM HAZ-1 through NMM HAZ-5 to reduce adverse effects related to listed hazardous materials sites to no adverse effect. See Appendix J for more detailed analysis of construction effects.	Adverse Effect	NPM HAZ-4 - Construction Best Management Practices for Maintenance and Storage Facility for Hazardous Materials NPM HAZ-5 - Construction Best Management Practices for Commerce/Citadel station for Hazardous Materials NMM HAZ-1 - Phase I Environmental Site Assessment [ESA] and Phase II ESA NMM HAZ-2 - Soil and Groundwater Management Plan NMM HAZ-3 - Metro’s Contractor Specifications NMM HAZ-4 - Safety Manuals and Construction Work Plans NMM HAZ-5 - Hazardous Building Survey and Abatement	No Adverse Effect
Water Resources (Water Quality and Erosion)	Construction activities could increase erosion and sedimentation and release pollutants that could affect water quality. Construction would comply with the National Pollution Discharge Elimination System Construction General Permit and associated stormwater pollution prevention plan and best management practices, as identified in NPM HWQ-2. The Study Area is relatively flat, which would minimize the risk of erosion and sedimentation. Areas of exposed soil that were previously paved would be repaved post construction. If encountered, groundwater contaminated with hazardous materials could spread into nearby surface water and groundwater, resulting in an adverse effect. Construction would adhere to applicable Waste Discharge Requirements and implement NMM HAZ-2, a Soil and Groundwater Management Plan to address handling and disposal of contaminated groundwater, and NMM HAZ-3, Metro’s Contractor Specifications for exposed soil and groundwater. Implementation of mitigation would reduce adverse effects to not adverse.	Adverse Effect	NPM HWQ-2 - Construction Best Management Practices for Water Resources NMM HAZ-2 - Soil and Groundwater Management Plan NMM HAZ-3 – Metro’s Contractor Specifications	No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Water Resources (Groundwater Resources)	There would be no construction within the Rio Hondo Spreading Grounds where most of the groundwater recharge in the vicinity occurs. The groundwater depth near the underground guideway is approximately 120 feet or greater below ground surface (Diaz-Yourman and Associates 2021) and the depth of the tunnel would be approximately 60 feet below ground surface. Since the water table would likely be below or at the lower level of construction activities, the amount of water that would need to be extracted, cleaned, and disposed of during construction would be minimal. Thus, there would be no adverse effect.	No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction effects on this resource.	No Adverse Effect
Water Resources (Drainage)	Construction would comply with the Construction General Permit and associated Stormwater Pollution Prevention Plan best management practices, as identified in NPM HWQ-2. Drainage systems would be constructed and connected to municipal systems per Metro Rail Design Criteria and jurisdictional permits. Metro/Metro's contractor would be responsible for preparing the drainage and grading plans and obtaining approval of the plans before construction. Thus, there would be no adverse effect.	No Adverse Effect	NPM HWQ-2 - Construction Best Management Practices for Water Resources	No Adverse Effect
Water Resources (Floodplain and Wetlands)	The Build Alternative, including the MSF site options, is not within any floodplains or wetlands, as discussed in Section 3.10 (Water Resources).	No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction effects on this resource.	No Effect
Land Use and Development (Land use compatibility ¹ for short-term street and sidewalk closures during construction)	Lane and/or road closures during construction would result in temporary periodic movement limitations for pedestrians, cyclists, and vehicles within and between local communities. Additionally, truck access to businesses along Washington Boulevard, and Acco Street and Yates Avenue for MSF Sites 1 and 2 respectively, would be disrupted during construction activities. Construction of MSF Site 3 is not expected to impact businesses. Disruptions to the communities would be minimized using jurisdiction-coordinated scheduling, advanced notification, and wayfinding signage, as set forth in NPM TRA-2. As identified in NPM TRA-4, access would be maintained to all properties surrounding the MSF. However, there would be an adverse effect from road and lane closures during construction. As required by NMM TRA-2, a Traffic Management Plan would minimize disruptions during construction and reduce adverse effects to no adverse effect.	Adverse Effect	NPM TRA-2 - Construction Best Management Practices for Transportation NPM TRA-4 - Construction Best Management Practices for the Maintenance and Storage Facility Regarding Transportation NMM TRA-2 - Traffic Management Plan	No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Land Use and Development (Land use compatibility for property acquisition and construction easements)	Temporary construction easements would be required for some construction activities. This would be limited to properties currently zoned for commercial or industrial uses, and relocation assistance and benefits would be provided per legal requirement and Metro policies. Properties under temporary construction easements would retain their original land use designation and zoning classifications and, upon termination of the construction easement, would likely return to their original use. Any change in use would have to comply with the local permitting process and zoning regulations.	No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction effects on this resource.	No Adverse Effect
Land Use and Development (Land use compatibility for MSF Site 1 and lead tracks)	Construction activities would require full closure of Acco Street for MSF Site 1, temporary lane closures on Yates Avenue for MSF Site 2, and other temporary changes to traffic circulation and controls. Effects would be minor and localized. As identified in NPM TRA-4, access would be maintained to all properties surrounding the MSF site options. Disruptions to communities would be minimized by coordinating with affected jurisdictions, implementing advanced notification, and wayfinding signage as set forth in NPM TRA-2. As required by NMM TRA-2, a Traffic Management Plan would minimize disruptions during construction and reduce adverse effects to not adverse.	Adverse Effect	NPM TRA-2 - Construction Best Management Practices for Transportation NPM TRA-4 - Construction Best Management Practices for the Maintenance and Storage Facility Regarding Transportation NMM TRA-2 - Traffic Management Plan	No Adverse Effect
Land Use and Development (Land use compatibility for MSF Site 2 and lead tracks)	Construction of the MSF and lead tracks would primarily occur within the right-of-way and properties to be acquired. MSF Site 2 and the surrounding area is industrialized with limited pedestrian and bicycle activity. Construction activities could require the temporary closure of some local bicycle facilities. Additionally, truck access for local businesses along Yates Avenue may be disrupted by construction staging areas. However, as identified in NPM TRA-4, access would be maintained to all properties surrounding MSF Site 2. Disruptions to communities and businesses would be minimized using jurisdiction-coordinated scheduling, advanced notification, and wayfinding signage as forth in NPM TRA-2. As required by NMM TRA-2, a Traffic Management Plan would minimize disruptions during construction and reduce adverse effects to not adverse.	Adverse Effect	NPM TRA-2 - Construction Best Management Practices for Transportation NPM TRA-4 - Construction Best Management Practices for the Maintenance and Storage Facility Regarding Transportation NMM TRA-2 - Traffic Management Plan	No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Land Use and Development (Land use compatibility for MSF Site 3 and lead tracks)	MSF Site 3 and the surrounding area is industrialized. The site would be used for construction staging and the tunnel boring machine launch site. Properties under construction easements would retain their original land use designation and zoning classifications and, upon termination of the construction easement, would likely return to their original use. Any change in use would have to comply with the local permitting process and zoning regulations. As identified in NPM TRA-4, access would be maintained to all properties surrounding MSF Site 3. Any disruptions to communities and businesses would be minimized using jurisdiction coordinated scheduling, advanced notification, and wayfinding signage as set forth in NPM TRA-2. As required by NMM TRA-2, a Traffic Management Plan would minimize disruptions during construction and reduce adverse effects to not adverse.	Adverse Effect	NPM TRA-2 - Construction Best Management Practices for Transportation NPM TRA-4 - Construction Best Management Practices for the Maintenance and Storage Facility Regarding Transportation NMM TRA-2 - Traffic Management Plan	No Adverse Effect
Acquisitions and Relocations (Acquisition, Displacement, Replacement and Relocation - Temporary)	Construction activities could require some property acquisitions in the form of temporary construction easements to allow construction staging on public sidewalks, streets, and if necessary, private property. Temporary construction easements would include temporary staging areas (including tunnel boring machine launch site), materials and equipment storage, contractor site offices during the construction period, and areas for cut and cover activities. The properties used for temporary construction easements would be returned to their original owners; however, these temporary construction easements could last the duration of construction (60 to 84 months) and could result in an adverse effect on property and businesses. In addition, short-term street and sidewalk closures during construction activities could result in temporary limitations on movement for vehicles, cyclists, and pedestrians, which could affect access to properties and businesses near the construction activities. Some temporary construction easements, and lane and road closures could result in adverse effects on property and businesses. As set forth in NPM TRA-2, best management practices would be implemented during construction to address pedestrian and vehicle access and minimize disruption from construction work zones. For the MSF, as identified in NPM TRA-4, access would be maintained to all surrounding properties throughout the course of construction. In addition, NMM TRA-2 would be implemented to develop a Traffic Management Plan that specifies measures to minimize disruption during construction, such as establishing detour routes and coordinating with local property and business owners and would reduce adverse effects to no adverse effect. Additionally, Metro has existing pilot programs that provide financial assistance to small businesses along rail corridors that are under construction. See Appendix M for more detailed analysis of construction effects.	Adverse Effect	NPM TRA-2 - Construction Best Management Practices for Transportation NPM TRA-4 - Construction Best Management Practices for the Maintenance and Storage Facility Regarding Transportation NMM TRA-2 - Traffic Management Plan	No Adverse Effect

Noise (Noise)	The Build Alternative would have adverse noise effects from the use of construction equipment near properties and sensitive receptors. Options have been identified for the construction staging area for the one relocated and three new stations that would be constructed under the Build Alternative. The potential construction noise effects are identified below. - Atlantic/Pomona station - construction staging area options could have an adverse noise effect on adjacent properties. - Atlantic/Whittier station - construction staging area options could have an adverse noise effect on adjacent properties. - Commerce/Citadel station - construction staging area options could not have a construction noise effect on adjacent properties because there are no noise sensitive receptors. - Greenwood station - construction staging area options could have an adverse impact effect on adjacent properties. - The tunnel boring machine launch site, which is also the MSF Site 3 location, would be in an industrial area where the nearest sensitive receptors are more than the identified FTA screening distance with intervening buildings (Appendix L). However, noise levels could exceed the FTA criteria for commercial or industrial receivers of 100 A-weighted decibel through the day or 100 A-weighted decibel at night at the buildings immediately adjacent to the site. - MSF Sites 1 and 2 are in an industrial area where the nearest sensitive receptors are located more than the identified FTA screening distance of 650 feet away with intervening buildings (Appendix L). However, noise levels would exceed the FTA criteria for commercial or industrial receivers of 100 A-weighted decibel through the day or 100 A-weighted decibel at night at one industrial building immediately adjacent to the MSF 1 site. As set forth in NPM NOI-2, construction activities would be carried out in compliance with Metro's Construction Noise and Vibration Control baseline specifications. Implementation of NMM NOI-1 through NMM NOI-10 would reduce the potential adverse effects during construction to no adverse effect. NMM NOI-1 would require implementation of a noise control plan and construction monitoring plan. NMM NOI-2 would require Metro's contractor to use cast-in-drilled hole or drilled piles rather than impact pile drivers where necessary. NMM NOI-3 would require the construction contractor to erect temporary noise barriers between noisy activities and noise sensitive receptors. NMM NOI-4 would require Metro's contractor to locate construction equipment and material staging areas away from sensitive receptors where practicable. NMM NOI-5 would require construction traffic and haul route routing in areas without noise-sensitive receptors where practicable. NMM NOI-6 would require contractors to use best available control technologies to limit excessive noise	Adverse Effect	NMM NOI-1 - Construction Noise Plan and Noise Monitoring Plan NMM NOI-2 - Cast-in-Drilled-Hole Construction Methodology NMM NOI-3 - Noise Barriers NMM NOI-4 - Construction Staging Area NMM NOI-5 - Haul Routes NMM NOI-6 - Best Available Control Technologies NMM NOI-7 - Construction Working Hours NMM NOI-8 - Public Notification of Construction Operations and Schedules NMM NOI-9 - Truck Staging NMM NOI-10 - Tunnel Vent Fans Away From Residences	No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
	when working near residences where practicable. NMM NOI-7 would require Metro to establish a Construction Hotline to resolve noise issues arising from construction activities. NMM NOI-8 and NMM NOI-9 would lessen noise associated with spoil removal where necessary, and NMM NOI-10 would require ventilation fans to be placed away from sensitive receptors. See Appendix L .			
Noise and Vibration (Vibration)	The distances at which an exceedance of the FTA vibration damage criterion of 0.2 inches per second would occur (for typical timber and masonry residences) ranging from approximately 15 feet for trucks, 20 feet for cast-in-drilled hole piling (based on caisson drilling) and bulldozers, and 35 feet for vibratory rollers and sonic pile drivers and 60 feet from impact pile drivers. As set forth in NPM NOI-2, construction activities would be carried out in compliance with Metro's Construction Noise and Vibration Control baseline specifications. The following mitigation measures would be implemented to reduce the potential vibration adverse effects during construction to no adverse effect. NMM NOI-2 would require Metro/Metro's contractor to use cast-in-drilled-hole or drilled piles rather than impact pile drivers to reduce excessive vibration where necessary to meet performance criteria. NMM NOI-4 would require Metro/Metro's contractor to locate construction equipment and material staging areas away from sensitive receptors. NMM NOI-5 would require Metro/Metro's contractor to route construction traffic and haul routes away from sensitive receptors where practicable. NMM NOI-7 would require Metro/Metro's contractor to establish a Construction Hotline to resolve vibration issues. NMM NOI-8 would require using a spoil removal conveyor for the tunnel boring machine (TBM) where necessary to reduce vibration. NMM NOI-13 would require Metro/Metro's contractor to identify properties that may be susceptible to vibration damage within 100 feet of the alignment to provide data for monitoring vibration effects and developing the construction vibration control plan and monitoring plan described in NMM NOI-14. NMM NOI-14 would require Metro/Metro's contractor to develop a construction vibration control plan and a construction vibration monitoring plan to minimize vibration effects and reduce the risk of damage to susceptible structures. See Appendix L .	Adverse Effect	NPM NOI-2 - Construction Noise and Vibration Control NMM NOI-2 - Cast-in-Drilled-Hole Construction Methodology NMM NOI-4 - Construction Staging Area NMM NOI-5 – Haul Routes NMM NOI-7 – Construction Working Hours NMM NOI-8 - Public Notification of Construction Operations and Schedules NMM NOI-13 – Identify Vibration Susceptible Properties NMM NOI-14 - Vibration Pre-Construction Survey and Control Plan	No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Safety and Security (Safety)	Disruption during construction, including the introduction of large on-site construction equipment and trucks hauling excavated material, would create potential safety hazards for pedestrians, bicyclists, bus riders, and motorists. Implementation of safety measures such as signage, partial lane closures, construction barriers, and supervision by safety and security personnel; compliance with safety requirements, including Occupational Safety and Health Administration, California Occupational Safety and Health Administration, and Metro safety and security programs, as identified in NPM TRA-2 would be implemented. Additionally, implementation of NMM TRA-2, requiring a Traffic Management Plan, would reduce adverse effects from road and lane closures to no adverse effect.	Adverse Effect	NPM TRA-2 - Construction Best Management Practices for Transportation NMM TRA-2 - Traffic Management Plan	No Adverse Effect
Safety and Security (Security)	The presence of construction equipment and use of construction staging could result in security incidents, such as theft and vandalism. For security purposes, construction staging areas would be equipped with a combination of fences, lighting, security cameras, and/or guards. Additionally, construction would comply with Metro guidelines pertaining to security and the implementation of standard site security practices identified in NPM TRA-2. Thus, there would be no adverse effect on security related to construction activities.	No Adverse Effect	NPM TRA-2 - Construction Best Management Practices for Transportation	No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Safety and Security (Emergency Response)	The potential for incidents of crime and terrorism could occur at construction sites and staging areas and could pose threats to human life and safety. Construction sites would be secured to prevent intrusion and illegal activities during construction as identified in NPM TRA-2. Emergency access could temporarily be obstructed by construction activities that could include temporary lane closures and obstruction of driveway access. Specifically: - Access to the East Los Angeles Sheriff's Station on 3rd Street. - Access to Los Angeles County Fire Department Station 50 at 2327 Saybrook Avenue in the City of Commerce (construction of the alignment and MSF Site 3 if selected). - Construction related street closures on Smithway Street at the Commerce/Citadel station. - MSF Site 1: Elimination of through access on Acco Street to Vail Avenue. - MSF Site 2: Temporary obstruction of driveways on Yates Avenue during aerial guideway construction. As identified in NPM TRA-2, lane and/or road closures are scheduled to minimize disruptions, and Metro would coordinate with staff of the East Los Angeles Sheriff's Station and Fire Station 50 in advance of any construction activities to preserve station access. For the MSF, alternative routes would be available for any streets requiring closure, as set forth in NPM TRA-4. However, there would be an adverse effect due to lane closures. Implementation of NMM TRA-2 would require development of a Traffic Management Plan, which would reduce adverse effects related to street closures to not adverse.	Adverse Effect	NPM TRA-2 - Construction Best Management Practices for Transportation NPM TRA-4 - Construction Best Management Practices for the Maintenance and Storage Facility Regarding Transportation NMM TRA-2 - Traffic Management Plan	No Adverse Effect
Transportation and Traffic (Transit)	Construction activities could disrupt the circulation system through temporary roadway closures, lane closures, bus stops, and sidewalk closures. These closures would cause a reduction in capacity of the affected roads. This reduction in capacity would likely cause vehicular traffic to divert to parallel facilities, thus increasing congestion, which may cause adverse effects by decreasing bus operating speeds along these streets. As a result, construction of the Build Alternative would result in a temporary adverse effect on transit operation. Implementation of a Traffic Management Plan through NMM TRA-2 would reduce this potential adverse effect on transit to not adverse. See Appendix O for more detailed analysis of construction effects.	Adverse Effect	NMM TRA-2 - Traffic Management Plan	No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Transportation and Traffic (Travel Patterns)	Construction could temporarily generate additional VMT related to construction work activities and the transport of excavated materials and construction equipment and supplies. Given the temporary nature of construction-related VMT and that construction-related traffic circulation changes (e.g., detours) would generally be localized to the work area as identified in NPM TRA-2, construction of the Build Alternative would not result in a substantial change in regional travel patterns or increase VMT. Therefore, construction of the Build Alternative would not result in an adverse effect related to regional transportation.	No Adverse Effect	NPM TRA-2 - Construction Best Management Practices for Transportation	No Adverse Effect
Transportation and Traffic (Local Roadway Circulation)	Construction activities for the Build Alternative would include temporary closures and detours that could temporarily cause a reduction in capacity along affected roads, particularly along Washington Boulevard, which is an important truck route. Construction activities would be temporary and localized to the work area and would follow best management practices for transportation, as set forth in NPM TRA-2 and NPM TRA-4. However, there would be an adverse effect on circulation from road and lane closures. Implementation of NMM TRA-2, a Traffic Management Plan, would reduce this adverse effect on pedestrians and bicyclists to not adverse.	Adverse Effect	NPM TRA-2 - Construction Best Management Practices for Transportation NPM TRA-4 - Construction Best Management Practices for the Maintenance and Storage Facility Regarding Transportation NMM TRA-2 - Traffic Management Plan	No Adverse Effect
Transportation and Traffic (Parking)	Off- and on-street parking facilities may be utilized for construction activities, such as staging for the storage of construction materials and equipment, temporary offices for field personnel, parking for field personnel, and fabrication of construction materials. Although temporary, the potential effects on parking could result in a temporary adverse effect from construction of the Build Alternative. There would be available on-street parking nearby (refer to Appendix O for amount of parking available). Additionally, implementation of a Traffic Management Plan through NMM TRA-2 would require coordination with businesses, emergency providers and local jurisdictions, which would reduce this potential adverse effect on parking to not adverse.	Adverse Effect	NMM TRA-2 - Traffic Management Plan	No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Transportation and Traffic (Pedestrian and Bicyclists)	Temporary lane closures would affect north-south bicycle routes at the proposed station locations. Bicycle traffic movements would be maintained during construction, but lane reductions and street closures could inhibit the flow of bicycle traffic and require detours. Construction of the Build Alternative could result in a potential temporary adverse effect related to bicycle and pedestrian circulation. NPM TRA-2 would be implemented during construction of the Build Alternative to address pedestrian and vehicle access and minimize disruption from construction work zones. As set forth in NPM TRA-4, site access to the MSF and surrounding properties will be retained and meet design requirements during construction. However, there would be an adverse effect from road and lane closures. Implementation of NMM TRA-2, a Traffic Management Plan, would reduce this adverse effect on pedestrians and bicyclists to not adverse.	Adverse Effect	NPM TRA-2 - Construction Best Management Practices for Transportation NPM TRA-4 - Construction Best Management Practices for the Maintenance and Storage Facility Regarding Transportation NMM TRA-2 - Traffic Management Plan	No Adverse Effect
Transportation and Traffic (Emergency Access)	Construction activities for the Build Alternative could potentially temporarily increase fire and police protection response times as a result of periodic construction-related street closures or detours. During construction, pedestrians, bicyclists, and motorists could experience temporary safety hazards localized around construction activities in the industrial area where the Build Alternative would be built. As identified in NPM TRA-2, Metro would coordinate with staff of the Los Angeles County Sheriff's Department and Los Angeles County Fire Department Station 50 in advance of any construction activities to preserve emergency access, and construction activities would occur in compliance with Occupational Safety and Health Administration, California Division of Occupational Safety and Health Administration, and Metro safety and security programs. However, there would be an adverse effect on circulation from road and lane closures. Implementation of NMM TRA-2, a Traffic Management Plan, would reduce this potential adverse effect on emergency access to not adverse.	Adverse Effect	NPM TRA-2 - Construction Best Management Practices for Transportation NMM TRA-2 - Traffic Management Plan	No Adverse Effect
Utilities (Water Supplies and Facilities)	Construction would require minimal water, mostly for dust control, which would be temporary and intermittent. Use of water would not necessitate the relocation or expansion of potable water infrastructure and would be compliant with Metro's Water Use and Conservation Policy (Metro 2009). Construction of the MSF could include relocation of domestic water and fire water pipelines to accommodate project elements. Relocation of any water appurtenances (e.g., fire hydrants and water meters) would be near existing facilities, which would minimize impacts from ground disturbance. The relocated water appurtenances would connect to existing pipelines and would not create new demand for water that would exceed the capacity of the water supply system.	No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction effects on this resource.	No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Utilities (Wastewater Treatment Facilities and Capacity)	Construction activities would generate wastewater through the use of temporary worker restrooms, may require relocation of sewer service feeds, and would require new sewer line connections for the MSF. No construction activities would exceed sewer capacity, generate significant wastewater, or necessitate the relocation or expansion of wastewater facilities.	No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction effects on this resource.	No Adverse Effect
Utilities (Stormwater Facilities)	Runoff could be generated by construction activities, such as dewatering and vegetation removal. Compliance with National Pollution Discharge Elimination System Construction General Permit and implementation of best management practices, as identified in NPM HWQ-2, would control runoff from construction. Thus, construction would not create or contribute runoff water that would exceed the capacity of the stormwater drainage system.	No Adverse Effect	NPM HWQ-2 - Construction Best Management Practices for Water Resources	No Adverse Effect
Utilities (Electric Power)	The Build Alternative would require installation of a power line to energize the tunnel boring machine. The line would connect to an existing Southern California Edison substation and extend along Yates Avenue to the proposed tunnel boring machine launch site. Installation of the underground power line would generally be conducted in the following sequence: excavation to the depth of the proposed utility line, laying of the conduit, tie-in, and then backfilling of the utility line. Utility relocations often entail temporary service interruptions during tie-in, which are typically planned for periods of minimum use (such as nights or weekends) when outages have the least effect on users. The underground trench would be excavated about 20 feet deep with maintenance holes every few hundred feet. Trench lines would be supported with support of excavation in conformance with California Occupational Safety and Health and covered with steel plates to maintain traffic use. Demand impacts related to this new power service feed would be temporary and would not result in a substantial change in usage of the service providers (i.e., Southern California Edison). Most of the light rail transit guideway tunnel would be constructed using a tunnel boring machine that would require electricity. The electricity used to power the tunnel boring machine would be sourced through a local substation and is not expected to exceed the capacity of the substation. Metro would coordinate with Southern California Edison prior to construction. Construction of the MSF would include the relocation and installation of electric lines to accommodate the site layout. The Build Alternative would not have significant environmental effects related to relocation or construction of electric power.	No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction effects on this resource.	No Adverse Effect

Topic	Description of Effects	Effects Before Implementation of Measure(s)	Proposed Measure	Effects After Implementation of Measure(s)
Utilities (Natural Gas)	Construction would consume minimal, temporary, and intermittent natural gas for construction equipment. Construction activities for the light rail transit guideway and stations would mostly take place within existing public right-of-way, and no natural gas facilities have been identified in the construction zone that would require relocation. Construction of the MSF would include the relocation and installation of gas pipelines, which would not have significant environmental effects. The relocated natural gas pipelines would connect to existing pipelines and would not create new demand for natural gas that would exceed the capacity of the SoCal Gas supply system.	No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction effects on this resource.	No Adverse Effect
Utilities (Telecommunication)	Construction may require the relocation of telecommunication facilities (e.g., cell towers and 5G-enabled small cell antennas). If relocated, the telecommunication facilities would be relocated in close proximity to their previous location. Construction would not require or result in any notable expansion of possible relocated telecommunication facilities or construction of new facilities.	No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction effects on this resource.	No Adverse Effect
Utilities (Solid Waste)	Construction would involve the generation and removal of solid waste associated with the various demolition and construction activities. This would result in an incremental and temporary increase in solid waste disposal at landfills and other waste disposal facilities. While it is anticipated that some excavated soil would be reused on-site, the remaining materials would be hauled off-site for disposal at any of the area landfills that accept and/or recycle construction/demolition materials in compliance with Assembly Bill 939. Waste would be brought to transfer stations in batches throughout the construction period. There are multiple transfer stations in Los Angeles County where this waste could be collected and transferred to the landfill. Construction of the Build Alternative would not generate solid waste in excess of state or local standards or in excess of the capacity of the local infrastructure or otherwise impair the attainment of solid waste reduction goals. The County anticipates adequate solid waste disposal capacity to be available over the next 15-year planning period (2019 to 2034) (LACDPW 2021). Therefore, there would be adequate capacity available in Los Angeles County to handle anticipated solid waste generation during the construction period.	No Adverse Effect	No avoidance, minimization, or mitigation measures are needed to address construction effects on this resource.	No Adverse Effect

Source: CDM Smith/AECOM JV 2026.

Note:

¹ Related construction effects for land use compatibility include construction staging, temporary right-of-way encroachments, and temporary access disruptions within or to adjacent existing land uses (e.g., residences, businesses, and other commercial uses). Temporary access disruption refers to a short-term, planned or unplanned interruption in the usual access to facilities, services, or areas. The disruption is typically intended to be resolved within a limited timeframe, after which normal access is restored.

Table 3.17-3 Avoidance, Minimization, and Mitigation Measures During Construction

Resource	Project Measures and Mitigation Measures
Biological Resources	NMM BIO-1: (Nesting Birds). Prior to the implementation of construction activities (e.g., demolition of structures, excavation, grading, construction of access roads) that would result in removal of or disturbances to vegetation providing bird nesting habitat, prior to pile driving near active bird nests, and prior to tree trimming during the maintenance period, the following shall occur: ▪ If construction is scheduled to occur during the bird nesting season (generally February 15 through September 15, and as early as January 1 for some raptors), vegetation that will be impacted by the Project shall be removed in advance of the construction activities and outside the nesting season, if feasible, to avoid take of birds, including raptors, or their eggs. If this is not feasible, prior to the implementation of construction activities, one nesting bird survey shall be conducted up to 72 hours prior to construction or maintenance that shall remove or disturb suitable nesting habitat during the breeding season. The survey shall be performed by a biologist with experience conducting breeding bird surveys. The biologist shall prepare a survey report within 24 hours of conducting the survey, documenting the presence or absence of any active nest of a migratory bird. If an active nest is located, an appropriate no-work buffer shall be established by the project biologist and vegetation removal within the buffer shall be postponed until the nest is vacated and juveniles have fledged and when there is no evidence of a second attempt at nesting. If vegetation is not removed within 72 hours of a nesting bird survey, a qualified biologist will conduct one updated nesting bird survey.
Historic, Archaeological, and Tribal Resources	NMM CUL-1: (Protection Measures – Differential Settlement/Vibration/ Tunnel Boring Machine [TBM] Specification for CVS Pharmacy [CVS]/Golden Gate Theater). ▪ Metro/Metro’s contractor shall conduct a pre-construction baseline survey and building protection report, implement building protection measures as specified in the building protection report, and conduct a post-construction survey of the CVS/Golden Gate Theater in relation to Guideway Alignment construction adjacent to the historic property. Building protection measures shall be implemented in conjunction with NMM NOI-1 through NMM NOI-14. ▪ Metro/Metro’s contractor shall conduct a pre-construction survey to establish baseline, pre-construction conditions and to assess the building category and the potential for ground-borne vibration to cause damage. Geotechnical investigations shall be undertaken to evaluate soil, groundwater, seismic, and environmental conditions along the alignment. This analysis shall inform the development of appropriate support mechanisms for cut and fill construction areas or areas that could experience differential settlement as a result of using a TBM in proximity to the historic property. An architectural historian or historical architect who meets the Secretary of the Interior’s Professional Qualification Standards (36 Code of Federal Regulation [CFR] Part 61) shall review final design documents prior to implementation of measures. ▪ Metro/Metro’s contractor shall implement building protection measures as identified in the building protection report to protect the structure from vibration damage. This may include methods such as underpinning, soil grouting, or other forms of ground improvement, as well as lower vibration equipment and/or construction techniques. If the building protection report determines the historic property has the potential to be impacted by differential settlement caused by TBM construction, appropriate building protection measures shall be identified and implemented such as the use of an earth pressure balance or slurry shield TBM. The implementation of the required measures and their effectiveness shall be documented in a post-construction survey. ▪ A post-construction survey shall also be undertaken to ensure that damage has not occurred to historic properties. An architectural historian or historical architect who meets the Secretary of the Interior’s Professional Qualification Standards (36 CFR Part 61) shall prepare an assessment of the implementation of the mitigation measures.

Resource	Project Measures and Mitigation Measures
Historic, Archaeological, and Tribal Resources	NMM CUL-2: (Unknown Archaeological Resources). ▪ Prior to any ground-disturbing activities, all construction personnel involved in ground-disturbing activities shall be provided with project/site specific cultural resources training conducted by a qualified archaeologist that meets the standards of the Secretary of the Interior. The training shall instruct the personnel regarding the legal framework protecting cultural resources, typical kinds of cultural resources that may be found within the Project area, proper procedures and notifications to implement if cultural resources are inadvertently discovered, and that removal of cultural resources can result in legal action. ▪ In addition, Metro shall retain a qualified archaeologist that meets the standards of the Secretary of the Interior to prepare a Project-wide Cultural Resources Monitoring and Mitigation Plan (CRMMP) that shall be implemented during construction. This document shall address areas where potentially significant precontact and historic archaeological deposits are likely to be located within the APE based on background research and a geoarchaeological analysis. ▪ The CRMMP shall include a detailed precontact and historic context that clearly demonstrates the themes under which any identified subsurface deposits would be determined significant. Should significant deposits be identified during earth-moving activities, avoidance is the preferred method of mitigation. If avoidance is not feasible, the CRMMP shall address methods for data recovery, anticipated artifact types, artifact analysis, report writing, repatriation of human remains and associated grave goods, and curation of historic materials. If any potentially eligible resources are identified, FTA will be notified. ▪ The CRMMP shall also require that a qualified Archaeologist in precontact and historical archaeology (36 Code of Federal Regulation Part 61) be retained prior to ground-disturbing activities. The CRMMP shall be a guide for monitoring activities. If buried cultural resources, such as flaked or ground stone, historic debris, building foundations, or non-human bone, are discovered during ground-disturbing activities, halt work in that area and within 50 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures. Treatment measures typically include development of avoidance strategies, capping with fill material, or mitigation of impacts through data recovery programs such as excavation or detailed documentation. As detailed in NMM TCP-2, a Native American monitor shall be retained if treatment involves work at a precontact site, or to monitor ground disturbing activities at other locations determined appropriate during Native American consultation. An archaeological monitor shall be retained for work at locations identified as sensitive during Native American consultation that require a tribal monitor or other locations identified as likely to contain archaeological resources. Identified areas shall be monitored by, or under the supervision of, the qualified Archaeologist, in accordance with the Project CRMMP. The CRMMP shall include the proper procedures and applicable regulations to follow in the event of discovery of human remains. If during cultural resources monitoring the qualified archaeologist determines that the sediments being excavated are previously disturbed or unlikely to contain significant cultural materials, the qualified archaeologist can specify that monitoring be reduced or eliminated.
Historic, Archaeological, and Tribal Resources	NMM TCP-1: (Tribal Cultural Places [TCP] Training). Prior to any ground-disturbing activities, all construction personnel involved in ground-disturbing activities shall be provided with project/site specific TCP training conducted by a qualified archaeologist or Native American Monitor. The training shall instruct the personnel regarding the legal framework protecting TCPs, typical kinds of TCPs that may be found within the project area, and proper procedures and notifications if TCPs are inadvertently discovered.

Resource	Project Measures and Mitigation Measures
Historic, Archaeological, and Tribal Resources	NMM TCP-2: (Retain a Native American Monitor). A Native American monitor shall be retained for work at locations identified as sensitive during Native American consultation and agreed upon between Metro and the Gabrieleño Band of Mission Indians-Kizh Nation Tribal Government. The monitor shall only be present on-site during the construction phases that involve ground disturbing activities where areas of ground disturbance and/or removed spoils are visible for inspection. If during cultural resources monitoring by a qualified archaeologist or Native American Monitor determines that the sediments being excavated are previously disturbed or unlikely to contain significant cultural materials, the qualified archaeologist or Native American Monitor can recommend that monitoring be reduced or eliminated.
Historic, Archaeological, and Tribal Resources	NMM TCP-3: (Unknown Tribal Cultural Places [TCP]). Metro shall retain a qualified archaeologist to prepare a project-wide Cultural Resources Monitoring and Mitigation Plan (CRMMP) that shall be implemented during construction. This document shall address areas where potentially significant precontact and historic archaeological deposits, and TCPs are likely to be located within the Area of Direct Impact (ADI) based on background research, a geoarchaeological analysis, and Native American consultation. The CRMMP shall encompass both archaeological and TCPs and shall be kept confidential. Preparation of the CRMMP shall necessitate the completion of pedestrian survey of the private property parcels in the Area of Potential Effects with direct impacts that were not accessible during the preparation of the Environmental Assessment. The CRMMP shall include a detailed precontact and historic context that clearly demonstrates the themes under which any identified resources shall be determined significant. Should significant deposits be identified during earth-moving activities, avoidance is the preferred method of mitigation. If avoidance is not feasible, the CRMMP shall address methods for data recovery, anticipated artifact types, artifact analysis, report writing, repatriation of human remains and associated grave goods, or other methods of disposition in consultation with the Tribe. The CRMMP shall also require that an archaeologist qualified in precontact and historical archaeology and a Native American monitor who is both approved by the Gabrieleño Band of Mission Indians-Kizh Nation Tribal Government and is listed under the Native American Heritage Commission's Tribal Contact list for the area of the project location be retained prior to ground-disturbing activities. The CRMMP shall be a guide for monitoring activities. If buried TCPs or cultural resources, such as flaked or ground stone, historic debris, building foundations, or non-human bone, are discovered during ground-disturbing activities, work shall stop in that area and within 50 feet of the find until a qualified archaeologist and Native American Monitor can assess the significance of the find and, if necessary, develop appropriate treatment measures. Metro shall assess the evidence of the find in consultation with affiliated Native American groups and make a determination on whether it meets criteria to be considered a TCP. If resources are Native American in origin and may also be TCPs, treatment of these resources shall be determined during Native American consultation. Treatment measures typically include development of avoidance strategies, capping with fill material, or mitigation of impacts through data recovery programs such as excavation or detailed documentation. The CRMMP shall include the proper procedures and applicable regulations to follow in the event of discovery of human remains.
Economic Impacts	NPM EFI-1: (Metro Joint Development Program and Metro Pilot Local Hiring Initiative). Project measures to address fiscal and economic impacts include the following: ▪ Upon completion of construction, property needed for construction but not required to maintain the physical infrastructure or necessary for access shall be evaluated for inclusion in the Metro Joint Development Program for possible income restricted housing development or other transit supportive land use, or included in a report to Metro Real Estate Asset Management for Surplus Land Act (SLA) requirements before sale. Any subsequent development shall be environmentally cleared separately from this Project and would undergo its own community input process. ▪ Project work shall comply with the Metro Pilot Local Hiring Initiative (effective May 21, 2021), which requires contractors working on Metro construction projects to comply with certain targeted hiring requirements, including prioritizing local workers from Los Angeles County.

Resource	Project Measures and Mitigation Measures
Geology, Soils, and Paleontological Resources	NPM GEO-1: (Geotechnical Investigation). The Project shall be designed and constructed per the Metro Rail Design Criteria (MRDC). The MRDC incorporates various design specifications from the Federal Highway Administration (FHWA), California Department of Transportation (Caltrans), the State of California, the County of Los Angeles, and other sources by reference. Key compliance sections of the MRDC relative to geology and soils are Section 5.3, Section 5.4, Section 5.6, and MRDC Section 5 Appendix, Metro Supplemental Seismic Design Criteria. Section 5.6 of the MRDC provides detailed requirements for planning and conducting a geotechnical investigation, geotechnical design methodologies, and reporting. In addition, Caltrans and the Los Angeles County Building Code (based on the California Building Code [CBC]) have independent design criteria for aerial structures (Caltrans) and building structures (County of Los Angeles) that are also required. In accordance with the MRDC, geotechnical report recommendations shall be incorporated into the project plans and specifications. These recommendations shall be a product of final design and shall address potential subsurface hazards. Without these report recommendations, the project plans and specifications shall not be approved and the Project shall not be allowed to advance into the final design stage or into construction.
Geology, Soils, and Paleontological Resources	NMM GEO-1: (Retaining a Qualified Paleontologist and a Qualified Paleontological Monitor). Metro shall retain a qualified paleontologist, meeting the Society of Vertebrate Paleontology (2010) education guidelines, to supervise a qualified paleontological monitor to carry out the following tasks: Prepare a Paleontological Resource Mitigation and Monitoring Plan (PRMMP) that includes identification and mapping of the areas of high sensitivity to be monitored during construction. The PRMMP will be written by a qualified paleontologist. These areas are defined as all areas within the Older alluvium in the project site where planned excavation will exceed three feet below the surface or three feet into undisturbed sediments and all areas within the Younger alluvium in the project site where planned excavation will exceed 10 feet below the surface or 10 feet into undisturbed sediments. The qualified paleontologist shall supervise the qualified paleontological monitor to monitor excavation in areas identified as likely to contain paleontological resources with the exception of tunnel boring machines (TBM) excavation, where monitoring is infeasible. The qualified paleontologist shall retain the option to reduce monitoring if, in his or her professional opinion, sediments being monitored are previously disturbed. Monitoring may also be reduced if the potentially fossiliferous units are determined to have low potential to contain fossil resources.
Geology, Soils, and Paleontological Resources	NMM GEO-2: (Ability to Readily Salvage Fossils and Samples of Sediment). Monitoring for paleontological resources and salvage of fossils shall occur in compliance with the Paleontological Resource Mitigation and Monitoring Plan (PRMMP) required by mitigation measure NMM GEO-1. The PRMMP shall specify that the qualified paleontologist and the qualified paleontological monitor are equipped to salvage fossils and samples of sediment as they are unearthed to avoid construction delays and empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens. Since Older alluvium yields small fossil specimens (microvertebrate fossils) likely to go unnoticed during typical large-scale paleontological monitoring, the PRMMP shall identify that matrix samples shall be collected and processed to determine the potential for small fossils to be recovered prior to substantial excavations in those sediments. If this sampling indicates that these units do possess small fossils, a matrix sample of 6,000 pounds shall be collected at various locations, to be specified by the paleontologist, within the construction area. These matrix samples shall also be processed for small fossils.
Geology, Soils, and Paleontological Resources	NMM GEO-3: (Ability to Identify and Permanently Preserve Specimens). The Paleontological Resource Mitigation and Monitoring Plan (PRMMP) required under mitigation measure NMM GEO-1 shall specify procedures for the discovery, recovery, preparation, and analysis of significant paleontological resources encountered during construction, in accordance with standards for recovery, reporting, and curation established by the Society of Vertebrate Paleontology (SVP). The qualified paleontologist shall make certain that recovered specimens be prepared to a point of identification and permanent preservation, including washing of sediments to recover small invertebrate and vertebrate fossils.

Resource	Project Measures and Mitigation Measures
Geology, Soils, and Paleontological Resources	NMM GEO-4: (Ability to Curate Specimen to a Professional Accredited Museum Repository). Curation of specimens shall occur in compliance with the Paleontological Resource Mitigation and Monitoring Plan (PRMMP) required by mitigation measure MM GEO-1. The PRMMP shall identify criteria for identifying specimens to be curated into a professional accredited museum repository with permanent retrievable storage and a curation agreement with the repository will be in place. A report of findings, with an appended itemized inventory of specimens, shall be prepared. The report and inventory, when submitted to the professional accredited museum repository, shall signify completion of the program to mitigate impacts to paleontological resources.
Hazardous Materials	NPM HAZ-2: (Construction Best Management Practices for Hazardous Materials). Construction best management practices (BMPs) for the Build Alternative shall include but not be limited to: ▪ Metro/Metro's contractor shall be required to obtain permits and comply with appropriate regulatory agency standards designed to avoid hazardous waste releases in accordance with the United States Environmental Protection Agency (USEPA), State Water Resources Control Board (SWRCB), Department of Toxic Substances Control (DTSC), California Division of Occupational Safety and Health Administration (Cal/OSHA), and the South Coast Air Quality Management District (SCAQMD). ▪ Development of a stormwater pollution prevention plan (SWPPP) in accordance with the SWRCB Construction Clean Water Act Section 402 General Permit conditions, and subject to regular inspections by applicable jurisdiction(s) to ensure compliance. The SWPPP shall include specifications for the following but not be limited to: ○ Maintain proper working conditions for vehicles and equipment to minimize potential fugitive emissions of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials. ○ Conduct servicing, refueling, and staging of construction equipment only at designated areas where a spill would not flow to drainages. Conduct equipment washing, if needed, only in designated locations where water would not flow into drainage channels. Implement drainage BMPs to protect water quality, such as oil/water separators, catch basin inserts, storm drain inserts, media filtration, and catch basin screens. Keep spill cleanup materials (e.g., rags, absorbent materials, and secondary containment) at the work site when handling materials. ○ Report hazardous spills to the designated Certified Unified Program Agency (CUPA) (i.e., Los Angeles County Fire Department Health Hazardous Materials Division or Santa Fe Springs Department of Fire-Rescue) and implement clean up immediately and proper disposal of contaminated soil at a licensed facility. ○ Establish properly designed, centralized storage areas to keep hazardous materials fully contained. ○ Keep spill cleanup materials (e.g., rags, absorbent materials, and secondary containment) at the work site when handling materials. ○ Implement monitoring program by the construction site supervisor that includes both dry and wet weather inspections. ▪ Transportation of hazardous materials shall comply with State regulations governing hazardous materials transporting included in the California Vehicle Code (Title 13 of the California Code of Regulations), the State Fire Marshal Regulations (Title 19 of the California Code of Regulations), and Title 22 of the California Code of Regulations. This includes: ○ Require all motor carrier transporters of hazardous materials to have a Hazardous Materials Transportation license issued by the California Highway Patrol. ○ Require the transport of hazardous materials via routes with the least overall travel time.

Resource	Project Measures and Mitigation Measures
	○ Prohibit the transportation of hazardous materials through residential neighborhoods. ○ Require transporters to take immediate action to protect human health and the environment in the event of a spill, release, or mishap. ○ Incorporate restrictions on haul routes into the construction specifications according to local permitting requirements. ▪ Contaminated soils and hazardous building materials and wastes shall be disposed of in accordance with federal, state, and local requirements at landfills serving the Los Angeles County region. ▪ Traffic control during construction shall follow local jurisdiction guidelines. For specialized construction tasks, it may be necessary to work during nighttime hours to minimize traffic disruptions. ▪ Standard practices shall be followed that include scheduling of lane and/or road closures to minimize disruptions and preparation of a Traffic Management Plan (see NMM TRA-2) that is approved with authorities having jurisdiction in coordination with local fire and police departments prior to construction.
Hazardous Materials	NPM HAZ-4: (Construction Best Management Practices for Maintenance and Storage Facility for Hazardous Materials). Construction best management practices (BMP) for the maintenance and storage facility (MSF) shall include but shall not be limited to: ▪ Both the federal Occupational Safety and Health Administration (OSHA) and California Division of Occupational Safety and Health Administration (Cal/OSHA) regulate worker exposure during construction activities that disturb lead-based paints (LBP). Any asbestos-containing material (ACM), if present, requires appropriate abatement of identified asbestos prior to demolition pursuant to the South Coast Air Quality Management District (SCAQMD) Rule 1403. ▪ Polychlorinated biphenyls (PCB)-containing fluorescent light fixtures and electrical transformers that are not labeled “No PCBs,” shall be assumed to contain PCBs, and shall be removed prior to demolition activities and be disposed of by a licensed and certified PCB removal contractor, in accordance with local, State, and federal regulations. The removal and disposal of the electrical transformers shall be the responsibility of the utility owner.
Hazardous Materials	NPM HAZ-5: (Construction Best Management Practices for Commerce/Citadel station for Hazardous Materials). Construction best management practices (BMP) for the Commerce/Citadel station only may include but not be limited to: ▪ Metro’s contractor shall sample soil suspected of contamination (obvious signs of contamination includes indicators such as odors, stains, or other suspect materials) for the purpose of classifying material and determining disposal requirements. If excavated soil is suspected or known to be contaminated, Metro’s contractor shall: ○ Segregate and stockpile the excavated material in a way that will facilitate measurement of the stockpile volume. ○ Spray the stockpile with water or a South Coast Air Quality Management District (SCAQMD) approved vapor suppressant and cover the stockpile with a heavy-duty plastic (i.e., Visqueen) to prevent soil volatilization in the atmosphere or exposure to nearby workers. ▪ Existing groundwater monitoring wells shall remain under ongoing groundwater investigations associated with off-site sources.

Resource	Project Measures and Mitigation Measures
Hazardous Materials	NMM HAZ-1: (Phase I Environmental Site Assessment [ESA] and Phase II ESA). Consistent with Metro’s standard practice, prior to the start of construction of the Project, the contractor must provide Phase I ESAs in accordance with standard ASTM methodologies, to assess the land use history of each parcel that would be acquired/utilized for the Project. The determination of parcels that require a Phase II ESA (i.e., soil, groundwater, soil vapor subsurface investigations) would be evaluated after the Phase I ESAs have been completed and would be based on the results of the Phase I ESAs. Specifically, if the Phase I ESAs identify suspected contamination in the soil, soil vapor, or groundwater, a Phase II ESA would be conducted to determine whether the suspect contamination had resulted in soil, groundwater, or soil vapor contamination exceeding regulatory action levels. If the Phase II ESA concludes that the site is contaminated, remediation or corrective action (e.g., removal of contamination, in-situ treatment, capping) would be conducted prior to or during construction under the oversight of federal, state, and/or local agencies (e.g., United States Environmental Protection Agency (USEPA), Department of Toxic Substances Control (DTSC), Los Angeles Regional Water Quality Control Board (LARWQCB), Los Angeles County) and in full compliance with current and applicable federal and state laws and regulations. Additionally, Voluntary Cleanup Agreements may be used for parcels where remediation or long-term monitoring is necessary. Before any ground disturbance occurs on or near the properties with active documented releases, Metro shall hire a qualified environmental professional to conduct a Phase II ESA to determine the potential presence of petroleum hydrocarbons, metals, (i.e., lead that was aerially deposited and lead chromate) that exceed thresholds established by the California Health and Safety Code and Title 22, and volatile organic compounds (VOC) in soil and/or groundwater in accordance with the findings and recommendations of the Draft Final Initial Site Assessment (ISA) Report prepared for the Build Alternative (Kleinfelder 2022). The Phase II ESA shall include sufficient soil and groundwater sampling and laboratory analysis to identify the types of chemicals and their respective concentrations. The Phase II ESA shall compare soil and groundwater sampling results against applicable environmental screening levels developed by the LARWQCB and/or the DTSC. If the Phase II ESA identifies contaminant concentrations above the screening levels, a site-specific soil and groundwater management plan shall be prepared and implemented as described in Mitigation Measure NMM HAZ-2. Metro shall consult with the LARWQCB, DTSC, and/or other appropriate regulatory agencies to ensure sufficient minimization of risk to human health and the environment is completed.

Resource	Project Measures and Mitigation Measures
Hazardous Materials	NMM HAZ-2: (Soil and Groundwater Management Plan). Prior to excavation, a site-specific soil and groundwater management plan shall be prepared by Metro's contractor to address handling and disposal of contaminated soil and groundwater prior to demolition, excavation and construction activities. Metro shall consult with the Los Angeles Regional Water Quality Control Board (LARWQCB), Department of Toxic Substances Control (DTSC), and/or other appropriate regulatory agencies to ensure sufficient minimization of risk to human health and the environment is completed. The soil and groundwater management plan shall specify all necessary procedures to ensure the safe handling and disposing of excavated soil, groundwater, and/or dewatering effluent in a manner that is protective of human health and in accordance with federal and state hazardous waste disposal laws, and with state and local stormwater and sanitary sewer requirements. At a minimum, the plan shall include the following: ▪ Identification and delineation of contaminated areas and procedures for limiting access to such areas to properly trained personnel; ▪ Step-by-step procedures for handling, excavating, characterizing, and managing excavated soils and dewatering effluent including procedures for containing, handling, and disposing of hazardous waste, procedures for containing, handling, and disposing of groundwater generated from construction dewatering, the method used to analyze excavated materials and groundwater for hazardous materials likely to be encountered at specific locations, appropriate treatment and/or disposal methods; ▪ Procedures for notification and reporting, including notifying and reporting to internal management and to local agencies; ▪ Minimum requirements for safety manuals and construction work plans, to protect the general public and workers in the construction area. ▪ Prior to excavation, Metro/ Metro's contractor shall prepare the Soil and Groundwater Management Plan and the results of environmental sampling shall be provided to Metro's contractors who shall be responsible for developing their own construction worker safety manuals and construction work plans and training requirements, per NMM HAZ-4. ▪ Metro's contractor shall sample groundwater suspected of contamination. If any contaminated groundwater is encountered during construction, Metro's contractor will stop work in the vicinity, cordon off the area, and contact Metro and will immediately notify the LARWQCB. In coordination with the LARWQCB, an investigation and remediation plan will be developed in order to protect public health and the environment. Any hazardous or toxic materials will be disposed according to local, state, and federal regulations.
Hazardous Materials	NMM HAZ-3: (Metro's Contractor Specifications). Metro shall include in Metro's contractor specifications the following requirement relating to hazardous materials: ▪ During all ground-disturbing activities, Metro's contractor(s) shall inspect the exposed soil and groundwater for obvious signs of contamination, such as odors, stains, or other suspect materials. Qualified personnel shall monitor for volatile organic compounds and other subsurface gases for concentrations exceeding United States Environmental Protection Agency (USEPA) Regional Screening Levels and/or California Department of Toxic Substances Control (DTSC) Screening Levels with a Photoionization Detector. Should signs of unanticipated contamination be encountered, work shall be halted and materials tested. An investigation shall be designed and performed to verify the presence and extent of contamination at the site, and a site-specific soil and groundwater management plan, as described under NMM HAZ-2 above, shall be prepared and implemented.

Resource	Project Measures and Mitigation Measures
Hazardous Materials	NMM HAZ-4: (Safety Manuals and Construction Work Plans). Metro/Metro's contractor shall prepare site-specific safety manuals and construction work plans that address worker health and safety to protect the general public and workers in the construction area for Metro's review and approval. The safety manuals and construction work plans shall be prepared in accordance with State, California Division of Occupational Safety and Health (Cal/OSHA), and federal Occupational Safety and Health Administration (OSHA) regulations. Copies of the plans shall be made available to construction workers for review during their orientation and/or regular health and safety meetings. The plans shall identify chemicals of concern, potential hazards, worker training requirements, personal protective equipment and devices, decontamination procedures, the need for personal or area monitoring, and emergency response procedures. The plans shall be amended, as necessary, if new information becomes available that could affect implementation of the plan.
Hazardous Materials	NMM HAZ-5: (Hazardous Building Survey and Abatement). Prior to demolition activities of any structures, Metro shall retain a California Division of Occupational Safety and Health Administration (Cal/OSHA) certified contractor to determine the presence or absence of building materials or equipment that contains hazardous materials, including asbestos, lead-based paint, and polychlorinated biphenyls (PCB)-containing equipment. If such substances are found to be present, Metro/Metro's contractor shall prepare and submit a workplan to the relevant oversight agency to demonstrate how these hazardous materials would be properly removed and disposed of in accordance with federal and state law, including South Coast Air Quality Management District (SCAQMD) Rule 1403 (Asbestos Emissions from Renovation/Demolition Activities). Following completion of removal activities, Metro shall submit documentation to the relevant oversight agency verifying that all hazardous materials were properly removed and disposed of.

Resource	Project Measures and Mitigation Measures
Water Resources	NPM HWQ-2: (Construction Best Management Practices for Water Resources). Construction best management practices (BMP) (may include but shall not be limited to): ▪ Establishment of an erosion and sediment control plan prior to the initiation of construction activities that includes BMPs such as: ○ Use of natural drainage, detention ponds, sediment ponds, or infiltration pits to allow runoff to collect and to reduce or prevent erosion. ○ Use of barriers to direct and slow the rate of runoff and to filter out large-sized sediments. ○ Use of downdrains or chutes to carry runoff from the top of a slope to the bottom. ○ Control of the use of water for irrigation so as to avoid off-site runoff. ▪ Development of a stormwater pollution prevention plan (SWPPP) in compliance with the State Water Resources Control Board (SWRCB) Construction General Permit, subject to regular inspections by applicable jurisdictions to ensure compliance. The SWPPP shall include specifications for the following, but shall not be limited to: ○ Good site management, or "housekeeping" measures related to managing construction materials, waste, vehicles and equipment, and other materials that could impact water quality. These include developing spill and leak prevention measures and a response plan, in accordance with law. Example measures include: – Designing centralized storage areas to keep hazardous materials fully contained – Containing and securely protecting stockpiled waste material from wind and precipitation unless actively being used – Keeping spill cleanup materials (e.g., rags, absorbent materials, and secondary containment) at the work site when handling materials ○ Sediment and erosion controls outlined in the SWRCB Construction General Permit, such as: – Implementing BMPs designed to reduce erosion of exposed soil such as soil stabilization controls, water for dust control, perimeter silt fences, placement of straw wattles, and sediment basins – Using weed-free material for erosion control – Minimizing the amount of exposed soil and disturbance where feasible – Establishing and maintaining effective perimeter controls – Stabilizing construction entrances and exits to control erosion and sedimentation from the site ○ Monitoring program to be implemented by the construction site supervisor that includes both dry and wet weather inspections. ▪ Implementation of drainage BMPs designed to protect water quality such as catch basin inserts, storm drain inserts, and catch basin screens.

Resource	Project Measures and Mitigation Measures
Noise and Vibration	NPM NOI-2: (Construction Noise and Vibration Control). Construction activities shall comply with Metro’s baseline specifications Section 01 56 19, Construction Noise and Vibration Control. Although Metro, as a state-chartered transportation agency, is exempt from local noise ordinances, the agency is committed to consistency with local construction noise limits whenever feasible and reasonable in accordance with its own construction specifications. Metro/Metro’s contractor shall utilize control measures from Metro’s specifications that effectively minimize noise and vibration impacts in the community. Some mitigation measures for Noise and Vibration are based on the provisions set forth in Section 01 56 19 and are refined to have more specificity towards the Project-related impacts concerning noise and vibration. Under NPM NOI-2, the Project shall comply with the entirety of Metro’s baseline specifications Section 01 56 19 and Metro/Metro’s contractor shall utilize control measures from its own specifications that effectively minimize noise and vibration impacts in the community, such as: ▪ Conducting at-grade construction activities adjacent to residential neighborhoods during the daytime whenever practicable. ▪ Requiring special permits for construction within a specified distance and a specified time period for residential zones during the nighttime and weekends. ▪ Using construction equipment with effective noise-suppression devices whenever feasible. ▪ Using noise control measures, such as enclosures and noise barriers, as necessary to protect the public and achieve compliance with Metro’s noise limits. ▪ Conducting all operations in a manner that will minimize, to the greatest extent practicable, disturbance to the public in areas adjacent to the construction activities and to occupants of nearby buildings.
Noise and Vibration	NMM NOI-1: (Construction Noise Plan and Noise Monitoring Plan). Metro shall require the Contractor to develop a construction noise control plan and a construction noise monitoring plan to minimize noise impacts. The construction noise plan shall include construction noise performance criteria. At a minimum, the performance criteria shall prohibit construction noise from exceeding the Federal Transit Administration (FTA) general assessment construction noise criteria of 80 A-weighted decibels (dBA) for nighttime work and 90 dBA for daytime work at residential properties, or 100 dBA at commercial or industrial properties for daytime or nighttime work. These criteria shall be measured at the boundary of any occupied property where the noise is being received.
Noise and Vibration	NMM NOI-2: (Cast-in-Drilled-Hole Construction Methodology). Metro shall require the Contractor to use construction methods that avoid pile-driving at locations containing noise- and vibration-sensitive receptors, such as residences, schools, and hospitals where practicable. Metro’s Contractor shall use cast-in-drilled hole (CIDH) or drilled piles rather than impact pile drivers if necessary to meet construction noise performance criteria established in the construction noise control plan and construction noise monitoring plan.
Noise and Vibration	NMM NOI-3: (Noise Barriers). Metro shall require the Contractor to erect temporary noise barriers between noisy activities and noise sensitive receptors as necessary to ensure compliance with applicable construction noise performance criteria as specified in the construction noise monitoring plan developed under NMM NOI-1. During construction, Metro shall perform audits to monitor the effectiveness of the noise barriers.
Noise and Vibration	NMM NOI-4: (Construction Staging Area). Metro shall require the Contractor to locate construction equipment and material staging areas away from sensitive receptors where practicable.
Noise and Vibration	NMM NOI-5: (Haul Routes). Metro shall require the Contractor to route construction traffic and haul routes along roads in areas without receptors sensitive to noise and vibration, where practicable.

Resource	Project Measures and Mitigation Measures
Noise and Vibration	NMM NOI-6: (Best Available Control Technologies). Metro shall require contractors to use best available control technologies to limit excessive noise when working near residences (e.g., piling noise shrouds) where practicable.
Noise and Vibration	NMM NOI-7: (Construction Working Hours). Metro shall notify the public, including schools, of construction operations and schedules. Metro shall provide a construction-alert publication and set up a Construction Hotline that shall reply to complaints within 2 working days.
Noise and Vibration	NMM NOI-8: (Public Notification of Construction Operations and Schedules). Metro shall require the Contractor to comply with Federal Transit Administration (FTA) ground-borne noise and vibration criteria confirmed in the construction noise monitoring plan for tunnel construction, including spoil removal and transport of segmental tunnel lining. This shall include, where necessary, methods such as installation of temporary tunnel track with smooth rail and wheels, and/or car speeds that limit structure-borne noise and vibration, or use of spoil removal conveyor.
Noise and Vibration	NMM NOI-9: (Truck Staging). Metro shall require the Contractor to not stage trucks in residential areas.
Noise and Vibration	NMM NOI-10: (Tunnel Vent Fans Away From Residences). Metro shall require temporary and permanent tunnel vent fans to be located away from residences. Metro shall require that noise from these shall be attenuated to comply with the noise control plan and local code requirements for fixed stationary heating, ventilation, and air conditioning (HVAC) or other machinery noise.
Noise and Vibration	NMM NOI-13: (Identify Vibration Susceptible Properties). Metro shall identify selected properties that may be susceptible to vibration damage within 100 feet of the alignment to determine the baseline structural integrity and condition of walls and joints using methods such as photographic documentation of the interior walls and/or exterior façade as a basis for comparison after construction is completed.
Noise and Vibration	NMM NOI-14: (Vibration Pre-Construction Survey and Control Plan). Metro shall require the Contractor to develop a construction vibration control plan and a construction vibration monitoring plan to minimize vibration impacts and reduce the risk of damage to susceptible structures. The construction vibration control plan shall specify implementation of vibration control measures to ensure that vibration during construction activities shall not exceed peak particle velocity (ppv) 0.2 inches per second (ips) at any non-engineered timber and masonry building.

Resource	Project Measures and Mitigation Measures
Transportation	NPM TRA-2: (Construction Best Management Practices for Transportation). Construction best management practices (BMP) for the Build Alternative shall include the following: ▪ Cooperation with corridor cities and the County shall occur throughout the construction process. Restrictions on haul routes may be incorporated into the construction specifications according to local permitting requirements. ▪ Pedestrian access to adjacent properties along the Project shall be maintained during construction. ▪ Construction-related traffic circulation changes shall generally be localized to the work area. ▪ Construction activities shall comply with Occupational Safety and Health Administration (OSHA), California Division of Occupational Safety and Health Administration (Cal/OSHA), and Metro safety and security programs. ▪ Safety for pedestrians, multi-use trail users (i.e., hikers, bicyclists, equestrians), and motorists shall be maintained during construction; methods may include signage, partial lane closures, and construction barriers. ▪ Access to Los Angeles Fire Department (LACFD) Station 50 on Saybrook Avenue shall be maintained during construction activities, including construction of MSF Site 3 (if selected), and the launch of the tunnel boring machine (TBM). ▪ Metro shall coordinate with staff of the Los Angeles County Sheriff's Department and LACFD Station 50 in advance of any construction activities to preserve station access. ▪ Lane and/or road closures shall be scheduled to minimize disruptions, including detour routes, in coordination with authorities having jurisdiction and local fire and police departments prior to construction. The nearest local first responders shall be notified, as appropriate, of traffic control measures in the Traffic Management Plan (see NMM TRA-2) during construction to coordinate emergency response routing. ▪ The Project shall be designed and constructed per applicable state, Metro, and city design criteria and standards, including adherence to design codes and standards such as OSHA, Cal/OSHA, California Public Utilities Commission (CPUC), California Manual of Uniform Traffic Control Devices (MUTCD), and Metro safety and security programs and standards (i.e., Metro Rail Design Criteria [MRDC] and Metro Systemwide Station Design Standards Policy).
Transportation	NPM TRA-4: (Construction Best Management Practices for the Maintenance and Storage Facility Regarding Transportation). Construction best management practices (BMP) for the maintenance and storage facility (MSF) must include but is not limited to: ▪ Access to nearby properties shall be maintained throughout the course of construction, and alternative routes shall be available for any streets requiring a full closure (e.g., use of Acco Street shall be routed to Flotilla Street or Washington Boulevard).
Transportation	NMM TRA-2: (Traffic Management Plan). Metro shall prepare a Traffic Management Plan as needed to facilitate the flow of traffic in and around construction zones. The Traffic Management Plan shall include, at minimum, the following measures: ▪ Where feasible, schedule construction-related travel (i.e., deliveries) during off-peak hours and maintain two-way traffic circulation along affected roadways during peak hours. ▪ Designated routes for project haul trucks shall be located along the Project corridor right-of-way (ROW) and/or major streets connecting to construction staging areas and the nearest freeways (e.g., State Routes (SR)-60 and Interstate (I)-5). Major streets may include Atlantic Boulevard, Saybrook Avenue, Telegraph Road, Washington Boulevard, and Whittier Boulevard. In cooperation with jurisdictions along the alignment and implemented throughout the construction process, these routes shall be consistent with local land use and mobility plans and situated to minimize noise, vibration, and other possible impacts.

Resource	Project Measures and Mitigation Measures
	▪ Metro shall maintain safe and convenient pedestrian routes to school by ensuring project haul routes and construction traffic, to the greatest extent possible, avoid any published and unofficial school pedestrian routes. ▪ Develop detour routes to facilitate traffic movement through construction zones without significantly increasing cut-through-traffic in adjacent residential areas. ▪ Develop and implement an outreach program and public awareness campaign in coordination with transit agencies to inform the general public about the construction process and planned roadway closures, potential impacts, and mitigation measures, including temporary bus stop relocation. ▪ Develop and implement a program with business owners to minimize effects to businesses during construction activity, including but not limited to signage programs and identification of detours (particularly for truck access). ▪ Where feasible, temporarily restripe roadways to maximize the vehicular capacity at locations affected by construction closures. ▪ Where feasible, temporarily remove on-street parking to maximize the vehicular capacity at locations affected by construction closures. ▪ Traffic control officers at major intersections during peak hours shall be provided as required by the Traffic Management Plan and Worksite Traffic Control Plans if delays are related to construction activities. ▪ Provide wayfinding signage, lighting and access to specify pedestrian safety amenities (such as handrails, fences, and alternative walkways) during construction. ▪ Where construction encroaches on sidewalks, walkways, crosswalks, and multi-use trails, special pedestrian safety measures shall be used, such as detour routes and temporary pedestrian shelters. ▪ Provide detour routes and signage to address temporary effects to multi-use trails and bicycle circulation, and minimize inconvenience (e.g., lengthy detours) to minimize users potentially choosing less safe routes if rerouted. ▪ Regular communication with school administrators shall be maintained to ensure sufficient notice is provided of construction activities and/or detours that could affect pedestrian routes to schools. ▪ Construction flaggers shall be implemented any time a construction ingress or egress is located within 200 feet of a schools' student entrance during school hours. ▪ Metro's construction outreach efforts shall include reaching out to local school district administrators to provide advanced information regarding construction activities and/or detours if construction activities will affect bus routes and stops to schools. ▪ Access to adjacent businesses and schools (including access to passenger loading areas for student drop-offs at schools) shall be provided via existing or temporary driveways or loading zones during business and school hours throughout the construction period.

Source: CDM Smith/AECOM JV 2026.

4.0 SECTION 4(F) PROPERTIES

This section evaluates the potential short-term construction and long-term effects of the No Build Alternative and the Build Alternative on Section 4(f) resources, as detailed in **Appendix N** (Section 4[f] Evaluation).

4.1 Affected Environment

Section 4(f) protects publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, as well as land of a publicly or privately owned historic site of national, state, or local significance. These are evaluated separately using two distinctive sets of criteria and study areas.

Section 4(f) Study Areas

- **Historic Properties: APE**
 - Approximately 4.7 miles long
 - Includes proposed right-of-way and acquisition and construction areas, all parcels adjacent to permanent site improvements and facilities, and any parcels where the elevated structure may alter historic properties
 - Includes area where a project may alter the character or use of a historic property; determined by FTA in consultation with the SHPO; see **Section 3.5** and **Appendix K** (Historic, Archaeological and Tribal Resources)
- **Parks, recreation areas, refuges: 0.25 mile from the Build Alternative alignment, stations, parking facility, MSF, and construction areas**
 - Represents a reasonable walking distance and reasonable distance in which an impact could occur; see **Appendix H** (Community Impacts Assessment)

Regulations related to Section 4(f) resources applicable to the Project are summarized in **Appendix S** (Regulatory Setting Summary) and detailed in **Appendix N**. A review of SHPO consultation documents, historic resources inventories (e.g., National Register), local planning documents, agency sources, maps, satellite imagery, and field surveys were conducted for this evaluation.

4.2 Section 4(f) Resources

4.2.1 Section 4(f) Use and Impact Determinations

Per 23 CFR 774, amended May 11, 2026, a Section 4(f) “use” of a protected property occurs when:

- Land is permanently incorporated into a transportation facility (e.g., permanent property acquisition)
- There is temporary occupancy of a property (e.g., staging area, construction easement), which adversely affects preservation
- There is a constructive use of a property (i.e., no land incorporated from the resource, but project proximity substantially impairs the resource)

A *de minimis* finding applies when a use does not adversely affect the activities, features, or attributes that make the property eligible for Section 4(f) protection. For historic sites, this means no historic property is affected, or the project would have “no adverse effect” (per Section 106). This is determined by FTA in consultation with SHPO (consultation is ongoing; see **Table 4.4** for preliminary Section 4(f) determinations). For parks, recreation areas, and wildlife and waterfowl refuges, it means the net impact does not harm the features, attributes, or activities qualifying the property for protection under Section 4(f).

FTA may not approve the use of Section 4(f) property for a proposed transportation project unless it determines there is no feasible and prudent avoidance alternative, and the action involves all possible planning to minimize harm or mitigate effects on the resource. If FTA concludes that there is no feasible and prudent avoidance alternative, then the Administration may approve, from among the remaining alternatives that use Section 4(f) property, only the alternative that causes the least overall harm in light of the preservation purpose.

4.2.2 Section 4(f) Resources in Area of Potential Effects

Table 4.1 identifies the historic resources listed or potentially eligible for listing on the National Register of Historic Places within the Area of Potential Effects, and **Table 4.2** identifies the public parks and recreation areas within the Study Area for parks, recreation areas, and refuges (**Section 4.1**). The Rio Hondo and San Gabriel River Spreading Grounds and Multi-Use Trails are located east of this Study Area and there are no other wildlife or waterfowl refuges within the Study Area for parks, recreation areas, and refuges. Section 4(f) resources are shown in **Figure 4.1**.

Table 4.1 Historic Properties Protected by Section 4(f)

Map ID	Property	Address	Date	Jurisdiction	NRHP Eligibility	Ownership
1	National Chicano Moratorium March (NRIS ID# 100002655)	3rd Street, Beverly Boulevard, Atlantic Avenue, Whittier Boulevard, and Salazar Park	1970	East Los Angeles (unincorporated Los Angeles County)	Listed in the NRHP	Public
2	Griffith STEAM Magnet Middle School (DOE-19-94-0475-0000)	4765 4th Street	1939	East Los Angeles (unincorporated Los Angeles County)	Eligible for listing in the NRHP	Public
3	Golden Gate Theater (NRIS IS# 82002192)	5176 Whittier Boulevard	1927	East Los Angeles (unincorporated Los Angeles County)	Listed in the NRHP	Private
4	Vail Field Industrial Addition –historic district	Vail Field Industrial Addition – Commerce	1951–1960	City of Commerce	Eligible for listing in the NRHP	Private
5	Pacific Metals Company building	2187 Garfield Avenue	1955 1952	City of Commerce	Eligible for listing in the NRHP	Private
6	Goodyear Tire and Rubber Company Warehouse	2353 Garfield Avenue	1952	City of Commerce	Eligible for listing in the NRHP	Private
7	E.F. Hauserman Company Building	6838 East Acco Street	1957	City of Commerce	Eligible for listing in the CRHR	Private

Map ID	Property	Address	Date	Jurisdiction	NRHP Eligibility	Ownership
8	Greenwood Elementary School (DOE-19-90-0060-0000)	900 Greenwood Avenue	1947	City of Montebello	Eligible for listing in the NRHP	Public
9	South Montebello Irrigation District	864 Washington Boulevard	1941	City of Montebello	Eligible for listing in the NRHP	Public
10	William and Florence Kelly House ("Kelly House") - Spanish Colonial Revival-style single-family residence	860 Washington Boulevard	1937	City of Montebello	Eligible for listing in the NRHP	Private

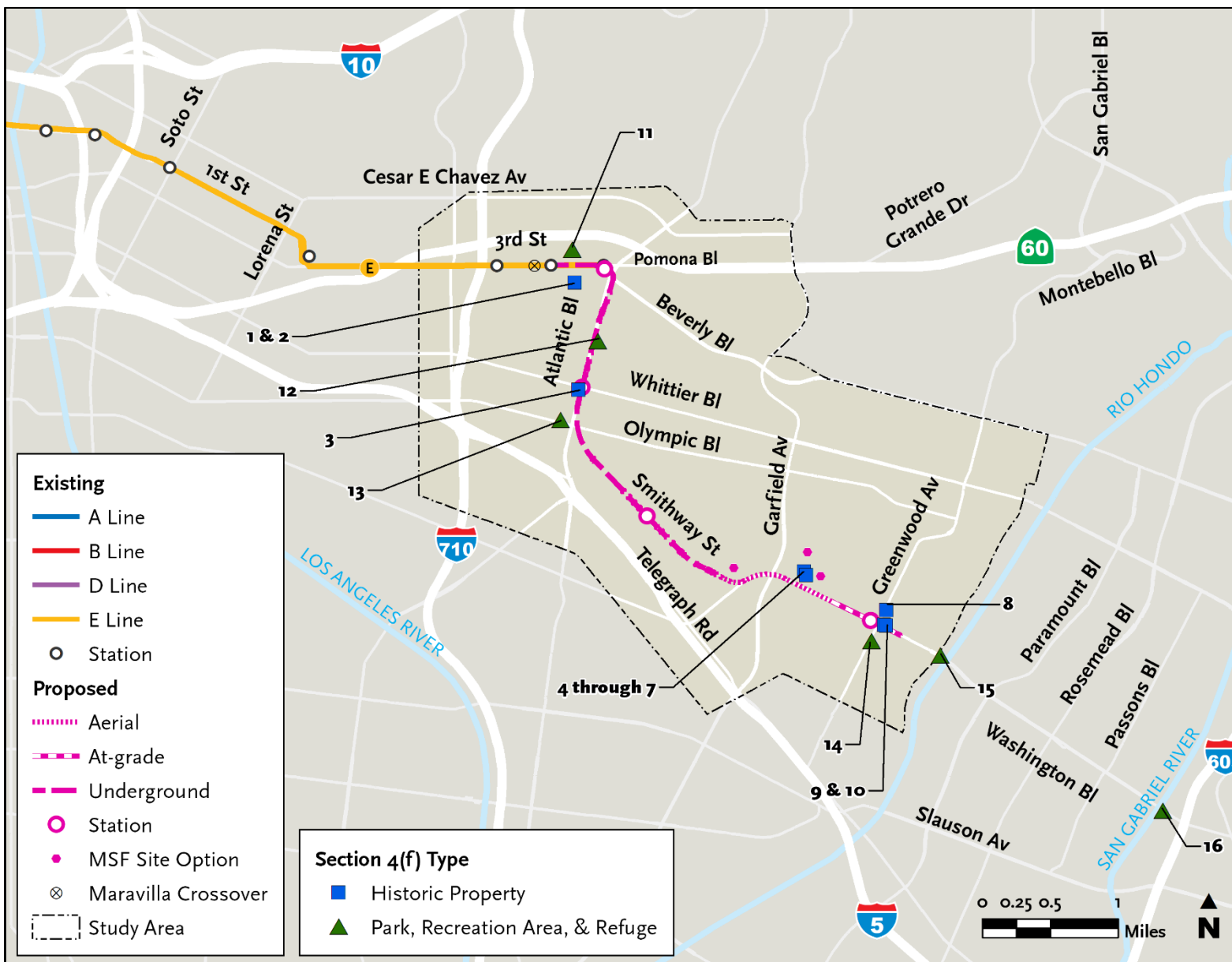
Source: South Central Coastal Information Center 2024; CDM Smith/AECOM JV 2026.

Key: NRIS ID# = National Register Information System Identification Number

Table 4.2 Parks and Recreation Areas Protected by Section 4(f)

Map ID	Property	Address	Jurisdiction	Distance from the Build Alternative
11	Belvedere Park Lake	3rd Street and La Verne Avenue	East Los Angeles (unincorporated Los Angeles County)	50 feet
12	Atlantic Avenue Park	570 Atlantic Boulevard	East Los Angeles (unincorporated Los Angeles County)	30 feet
13	Woods Avenue Park	Verona Street and Woods Avenue	East Los Angeles (unincorporated Los Angeles County)	375 feet
14	Chet Holifield Park and Community Center	1060 Greenwood Avenue	City of Montebello	425 feet
15	Rio Hondo Spreading Grounds and Multi-Use Trail	Not available	City of Pico Rivera	1,600 feet
16	San Gabriel River Spreading Grounds and Bike Multi-Use Trails	Not available	City of Pico Rivera	2.15 miles

Source: Los Angeles County Department of Parks and Recreation 2024, 2025.



Source: County of Los Angeles Department of Regional Planning 2025; Los Angeles County Department of Parks and Recreation 2024; Metro and CDM Smith/AECOM JV 2026.

Figure 4.1 Section 4(f) Resources

4.3 No Build Alternative

The No Build Alternative, as described in **Section 2.2** (No Build Alternative) of the EA, would include already planned and funded roadway and transit projects but would not provide a rail transit option for communities in eastern Los Angeles County. Overall, as shown in **Table 4.3**, the No Build Alternative would not impact Section 4(f) resources, and would result in no adverse effect on Section 4(f) resources.

Table 4.3 Section 4(f) Impact Summary – No Build Alternative

Topic	Impact	Rationale
Section 4(f) resources	No Adverse Effect	Construction of planned transit and roadway projects would adhere to applicable federal regulations regarding the treatment and protection of Section 4(f) resources.

Source: Metro; CDM Smith/AECOM JV 2026.

4.4 Build Alternative

The Build Alternative would either have no use of Section 4(f)-protected properties, or would be subject to a *de minimis* impact finding for all Section 4(f)-protected properties. Consequently, the Build Alternative does not require evaluation of avoidance alternatives, and a least overall harm analysis is not necessary. **Table 4.4** summarizes the impacts to the Section 4(f) properties within the Area of Potential Effects.

4.4.1 Use of Section 4(f) Properties through Permanent Incorporation and/or Temporary Occupancy

Demolition and construction activities would represent a use through temporary occupancy of the National Chicano Moratorium March Historic District (National Register Information System Identification Number [NRIS ID#] 100002655). Permanent property acquisition, demolition, and construction activities would represent a use through permanent incorporation and temporary occupancy of the Vail Field Industrial Addition historic district. Additionally, permanent property acquisition and construction of the aerial supports for MSF Site 2 within the Pacific Metals Company building parking lot would represent a use through permanent incorporation and temporary occupancy if MSF Site 2 is selected.

During the public review of the EA, FTA will consult with SHPO regarding the finding of effect and request concurrence on the finding of no adverse effect to historic resources.

4.4.1.1 National Chicano Moratorium March Historic District

Construction of the Build Alternative would remove and replace asphalt pavement along portions of the historic district's contributing march route at 3rd Street, Beverly Boulevard, Atlantic Boulevard, and Whittier Boulevard and install a trench within the existing right-of-way at 3rd Street and La Verne Avenue where the existing alignment would transition underground. Temporary occupancy from construction would represent a use.

There would be no use of the following Section 4(f) properties through permanent incorporation or temporary occupancy:

- Griffith STEAM Magnet Middle School
- Golden Gate Theater
- Goodyear Tire and Rubber Company Warehouse
- E.F. Hauserman Company
- Greenwood Elementary School
- South Montebello Irrigation District
- William and Florence Kelly House ("Kelly House") - Spanish Colonial Revival-style single-family residence
- Belvedere Park Lake
- Atlantic Avenue Park
- Woods Avenue Park
- Chet Holifield Park and Community Center
- Rio Hondo Spreading Grounds and Multi-Use Trail
- San Gabriel River Spreading Grounds and Bike Multi-Use Trail

Removing and replacing pavement along the march route would not impair the significance of any of the contributing elements to the historic district, such as the March Route, the El Barrio Free Clinic, Silver Dollar Café, or Ruben Salazar Park. Street and sidewalk improvements under the Build Alternative would maintain the march route, and improvements would be made using matching materials (asphalt). The Build Alternative would not result in the permanent reconfiguration of the streets and sidewalks that contribute to the historic district's significance. The district's use would not change, nor would the physical features within the property's setting that contribute to its historic significance. The historic district would still convey its historical significance and there would be no adverse effect on the march route. Therefore, the use from the Build Alternative would result in a *de minimis* impact.

4.4.1.2 Vail Field Industrial Addition Historic District

The Build Alternative would permanently acquire and demolish six properties that contribute to the Vail Field Industrial Addition historic district. Permanent incorporation from acquisition and demolition and temporary occupancy from construction activities would represent a use. Refer to **Appendix M** (Real Estate and Acquisition Impacts Report) for acquisition effects of the Build Alternative. Further, MSF Site 3 is within the historic district. If selected, MSF Site 3 would be at the site of three of the six properties demolished during construction that contribute to the historic district. Despite demolition of these six buildings, the district core would remain intact with enough contributors with characteristics to convey its historical significance, and the district would be eligible for listing in the National Register of Historic Places. Therefore, the Build Alternative would not have an adverse effect on the historic district and the use from the Build Alternative would result in a *de minimis* impact.

4.4.1.3 Pacific Metals Company Property

If MSF Site 2 is selected, the aerial supports for the guideway would be sited within the Pacific Metals Company property's existing parking lot. The new aerial structure would require partial permanent property acquisition and introduce a new visual element. Permanent incorporation from acquisition and temporary occupancy from guideway construction activities would represent a use (**Appendix M**). However, the guideway would be at a relatively similar height to the existing utility infrastructure and would not alter the façade of the Pacific Metals Company building, change the historic character of the building, nor diminish its significance. The construction activities and alteration of the setting with the new visual element of the aerial structure would not materially impair the building's integrity, and therefore, would result in no adverse effect. Therefore, the use from MSF Site 2 would result in a *de minimis* impact. Aerial supports for MSF Sites 1 and 3 would be located within the median of Washington Boulevard and would not result in a use of the Pacific Metals Company building.

Table 4.4 *De Minimis* Impacts to Section 4(f) Resources

Property Name	Use Type	Preliminary Section 4(f) Determination	Justification for Minimal Impact
National Chicano Moratorium March	Use through temporary occupancy	<i>De Minimis</i> Impact	- No impact on the March Route, the El Barrio Free Clinic, Silver Dollar Café, or Ruben Salazar Park. - Street and sidewalk improvements and installation of a trench would utilize matching materials to maintain historic integrity. - Avoids permanent reconfiguration of the march route and its setting. - No adverse effect on march route, resulting in a "<i>de minimis</i>" impact.

Property Name	Use Type	Preliminary Section 4(f) Determination	Justification for Minimal Impact
Vail Field Industrial Addition – historic district	Use through permanent incorporation and temporary occupancy	<i>De Minimis</i> Impact	- Despite demolition of six contributors, core of historic district would remain intact with enough contributors to convey historic significance. - No adverse effect on historic district, resulting in a “<i>de minimis</i>” impact.
Pacific Metals Company building	MSF Sites 1 and 3: No use MSF Site 2: Use through permanent incorporation and temporary occupancy	MSF Sites 1 and 3: No use MSF Site 2: <i>De Minimis</i> Impact	- Construction of aerial supports within property parking lot for MSF Site 2 would not affect building’s façade, change its character, or diminish its significance. - No adverse effect on the building, resulting in a “<i>de minimis</i>” impact.

Source: South Central Coastal Information Center 2024; CDM Smith/ AECOM JV 2025; Los Angeles County Department of Parks and Recreation 2024.

Key: no use = no permanent incorporation of a property or temporary occupancy of a property that adversely affects preservation

4.4.2 Constructive Use of Section 4(f) Properties

The Build Alternative would not substantially impair any Section 4(f) resources due to project proximity, and there would be no constructive use of any Section 4(f) resource. Construction activities could produce localized noise and air pollutant emissions or result in temporary lane and/or road closures that could affect any of the Section 4(f) resources, as discussed in **Appendix O** (Transportation Impacts Report) and **Appendix L** (Noise and Vibration Impacts Report). As discussed in **Appendix F** (Air Quality Impacts Report), there would be no adverse effect on air quality from construction activities. As set forth in NPM TRA-2 (Construction Best Management Practices for Transportation) and NPM NOI-2 (Construction Noise and Vibration Control), the Build Alternative would adhere to transportation best management practices and noise specifications during construction. Implementation of NMM NOI-1 (Construction Noise Plan and Noise Monitoring Plan) and NMM TRA-2 (Traffic Management Plan) would reduce adverse effects from noise and traffic circulation changes during construction, and thus, there would be no constructive use on Section 4(f) properties.

The new open trench along 3rd Street could adversely impact access to Belvedere Park Lake by eliminating vehicle and pedestrian crossings of 3rd Street at La Verne Avenue. Left turns would also be eliminated at Civic Center Way. U-turns would be allowed at Medick Avenue and Woods Avenue to facilitate traffic movement to and from La Verne Avenue. Vehicles could also access Belvedere Park Lake from the existing entrance on Mednick Avenue north of 3rd Street. Further, the existing pedestrian crosswalk at Civic Center Way would remain, and a new pedestrian crosswalk east of La Verne Avenue would be constructed to provide access to Belvedere Park Lake and other facilities. Therefore, access to Belvedere Park Lake would be maintained and there would be no constructive use of the park.

The underground guideway and Atlantic/Whittier station would be within 80 feet of the Golden Gate Theater. Vibration could affect the historic resource, however, NMM CUL-1 (Protection Measures – Differential Settlement/Vibration/Tunnel Boring Machine Specifications for CVS Pharmacy/Golden Gate Theater) would reduce the potential for vibration during construction activities to damage the Golden Gate Theater, as discussed in **Section 3.5** and **Appendix K**. Thus, there would be no constructive use of the Golden Gate theater.

4.4.3 Agency Coordination and Consultation

This section summarizes consultation and coordination with officials with jurisdiction over Section 4(f) properties and provides an overview of the public and agency review of the Section 4(f) evaluation.

For historic properties, FTA and Metro informed the officials with jurisdiction (State and Tribal Historic Preservation Offices and consulting parties) of the intent to make a *de minimis* finding contingent on their concurrence with the Section 106 finding. The notification included a request for input or acknowledgement. No additional public notice beyond the standard Section 106 requirements is required. Section 106 coordination is discussed in **Appendix K**.

The Project would not result in the use of any parks, recreational areas, or wildlife and waterfowl refuges; therefore, consultation with the officials with jurisdiction over those resources is not required under Section 4(f).

4.5 Avoidance, Minimization, and Mitigation Measures for the Build Alternative

The measures identified in **Table 4.5** would be implemented for operation of the Build Alternative.

Table 4.5 Avoidance, Minimization, and Mitigation Measures

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
Section 4(f) use through permanent incorporation and/or temporary occupancy	The Build Alternative would have a <i>de minimis</i> impact on three Section 4(f) resources, as shown in Table 4.4	No avoidance, minimization, or mitigation measures are needed	None	<i>De Minimis</i> impact – see Table 4.4
Section 4(f) Constructive Use	Potential transportation effects on Section 4(f) properties during construction from temporary lane and/or road closures	NPM TRA-2 (Construction Best Management Practices for Transportation). Construction best management practices (BMP) for the Build Alternative shall include the following: - Cooperation with the corridor cities and the County shall occur throughout the construction process. Restrictions on haul routes may be incorporated into the construction specifications according to local permitting requirements. - Pedestrian access to adjacent properties along the Project shall be maintained during construction. - Construction-related traffic circulation changes shall generally be localized to the work area. - Construction activities shall comply with Occupational Safety and Health Administration (OSHA), California Division of Occupational Safety and Health Administration (Cal/OSHA), and Metro safety and security programs. - Safety for pedestrians, multi-use trail users (i.e., hikers, bicyclists, equestrians), and motorists shall be maintained during construction; methods may include signage, partial lane closures, and construction barriers. - Access to Los Angeles County Fire Department (LACFD) Station 50 on Saybrook Avenue shall be maintained during construction activities, including construction of MSF Site 3 (if selected), and the launch of the tunnel boring machine (TBM). - Metro shall coordinate with staff of the Los Angeles County Sheriff's Department and LACFD Station 50 in advance of any construction activities to preserve station access. - Lane and/or road closures shall be scheduled to minimize disruptions, including detour routes, in coordination with authorities having jurisdiction and local fire and police departments prior to construction. The nearest local first responders shall be notified, as appropriate, of traffic control measures in the Traffic Management Plan (see NMM TRA-2) during construction to coordinate emergency response routing.	Project Measure	No Constructive Use - Construction best management practices related to transportation would be implemented

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
		The Project shall be designed and constructed per applicable state, Metro, and city design criteria and standards, including adherence to design codes and standards such as the OSHA, Cal/OSHA, California Public Utilities Commission (CPUC), California Manual of Uniform Traffic Control Devices (MUTCD), and Metro safety and security programs and standards (i.e., Metro Rail Design Criteria [MRDC] and Metro Systemwide Station Design Standards Policy).		
Section 4(f) Constructive Use	Potential noise effects on Section 4(f) properties during construction from use of construction equipment near Section 4(f) properties	NPM NOI-2 (Construction Noise and Vibration Control). Construction activities shall comply with Metro's baseline specifications Section 01 56 19, Construction Noise and Vibration Control. Although Metro, as a state-chartered transportation agency, is exempt from local noise ordinances, the agency is committed to consistency with local construction noise limits whenever feasible and reasonable in accordance with its own construction specifications. Metro/Metro's contractor shall utilize control measures from Metro's specifications that effectively minimize noise and vibration impacts in the community. Some mitigation measures for Noise and Vibration are based on the provisions set forth in Section 01 56 19 and are refined to have more specificity towards the Project-related impacts concerning noise and vibration. Under NPM NOI-2, the Project shall comply with the entirety of Metro's baseline specifications Section 01 56 19 and Metro/Metro's contractor shall utilize control measures from its own specifications that effectively minimize noise and vibration impacts in the community, such as: ▪ Conducting at-grade construction activities adjacent to residential neighborhoods during the daytime whenever practicable. ▪ Requiring special permits for construction within a specified distance and a specified time period for residential zones during the nighttime and weekends. ▪ Using construction equipment with effective noise-suppression devices whenever feasible. ▪ Using noise control measures, such as enclosures and noise barriers, as necessary to protect the public and achieve compliance with Metro's noise limits. Conducting all operations in a manner that will minimize, to the greatest extent practicable, disturbance to the public in areas adjacent to the construction activities and to occupants of nearby buildings.	Project Measure	No Constructive Use - Construction best management practices related to noise would be implemented
Section 4(f) Constructive Use	Potential transportation effects on Section 4(f) properties during construction from temporary lane and/or road closures	NMM TRA-2 (Traffic Management Plan). Metro shall prepare a Traffic Management Plan as needed to facilitate the flow of traffic in and around construction zones. The Traffic Management Plan shall include, at minimum, the following measures: ▪ Where feasible, a majority of schedule construction-related travel (i.e., deliveries) during off-peak hours and maintain two-way traffic circulation along affected roadways during peak hours. ▪ Designated routes for project haul trucks shall be located along the Project corridor right-of-way (ROW) and/or major streets connecting to construction staging areas and the nearest	Mitigation Measure	No Constructive Use - potential adverse effects on traffic circulation from road and lane closures during construction

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
		freeways (e.g., State Routes (SR)-60 and Interstate (I)-5). Major streets may include Atlantic Boulevard, Saybrook Avenue, Telegraph Road, Washington Boulevard, and Whittier Boulevard. In cooperation with the jurisdictions along the alignment and implemented throughout the construction process, these routes shall be consistent with local land use and mobility plans and situated to minimize noise, vibration, and other possible impacts. ▪ Metro shall maintain safe and convenient pedestrian routes to school by ensuring project haul routes and construction traffic, to the greatest extent possible, avoid any published and unofficial school pedestrian routes. ▪ Develop detour routes to facilitate traffic movement through construction zones without significantly increasing cut-through-traffic in adjacent residential areas. ▪ Develop and implement an outreach program and public awareness campaign in coordination with transit agencies to inform the general public about the construction process and planned roadway closures, potential impacts, and mitigation measures, including temporary bus stop relocation. ▪ Develop and implement a program with business owners to minimize effects to businesses during construction activity, including but not limited to signage programs and identification of detours (particularly for truck access). ▪ Where feasible, temporarily restripe roadways to maximize the vehicular capacity at locations affected by construction closures. ▪ Where feasible, temporarily remove on-street parking to maximize the vehicular capacity at locations affected by construction closures. ▪ Traffic control officers at major intersections during peak hours shall be provided as required by the Traffic Management Plan and Worksite Traffic Control Plans if delays are related to construction activities. ▪ Provide wayfinding signage, lighting and access to specify pedestrian safety amenities (such as handrails, fences, and alternative walkways) during construction. ▪ Where construction encroaches on sidewalks, walkways, crosswalks, and multi-use trails, special pedestrian safety measures shall be used, such as detour routes and temporary pedestrian shelters. ▪ Provide detour routes and signage to address temporary effects to multi-use trails and bicycle circulation, and minimize inconvenience (e.g., lengthy detours) as to minimize users potentially choosing less safe routes if rerouted. Regular communication with school administrators shall be maintained to ensure sufficient notice of construction activities and/or detours, that could affect pedestrian routes to schools is provided.		would be reduced

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
		- Construction flaggers shall be implemented any time a construction ingress or egress is located within 200 feet of a school's student entrance during school hours. - Metro's construction outreach efforts shall include reaching out to local school district administrators to provide advanced information regarding construction activities and/or detours if construction activities will affect bus routes and stops to schools. - Access to adjacent businesses and schools (including access to passenger loading areas for student drop-offs at schools) shall be provided via existing or temporary driveways or loading zones during business and school hours throughout the construction period.		
Section 4(f) Constructive Use	Potential noise effects on Section 4(f) properties during construction from use of construction equipment near Section 4(f) properties	NMM NOI-1 (Construction Noise Plan and Noise Monitoring Plan). Metro shall require the Contractor to develop a construction noise control plan and a construction noise monitoring plan to minimize noise impacts. The construction noise plan shall include construction noise performance criteria. At a minimum, the performance criteria shall prohibit construction noise from exceeding the Federal Transit Administration (FTA) general assessment construction noise criteria of 80 A-weighted decibels (dBA) for nighttime work and 90 dBA for daytime work at residential properties, or 100 dBA at commercial or industrial properties for daytime or nighttime work. These criteria shall be measured at the boundary of any occupied property where the noise is being received.	Mitigation Measure	No Constructive Use – potential adverse effects related to noise from construction equipment use during construction would be reduced

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
Section 4(f) Constructive Use	Construction of the alignment and station has the potential to cause vibration and ground settlement that could affect the Golden Gate Theater	NMM CUL-1 (Protection Measures – Differential Settlement/Vibration/ Tunnel Boring Machine [TBM] Specifications for CVS Pharmacy [CVS]/Golden Gate Theater). ▪ Metro/Metro’s contractor shall conduct a pre-construction baseline survey and building protection report, implement building protection measures as specified in the building protection report, and conduct a post-construction survey of the CVS/Golden Gate Theater in relation to Guideway Alignment construction adjacent to the historic property. Building protection measures shall be implemented in conjunction with NMM NOI-1 through NMM NOI-14. ▪ Metro/Metro’s contractor shall conduct a pre-construction survey to establish baseline, pre-construction conditions and to assess the building category and the potential for ground-borne vibration to cause damage. Geotechnical investigations shall be undertaken to evaluate soil, groundwater, seismic, and environmental conditions along the alignment. This analysis shall inform the development of appropriate support mechanisms for cut and fill construction areas or areas that could experience differential settlement as a result of using a TBM in proximity to the historic property. An architectural historian or historical architect who meets the Secretary of the Interior’s Professional Qualification Standards (36 Code of Federal Regulation [CFR] Part 61) shall review final design documents prior to implementation of measures. ▪ Metro/Metro’s contractor shall implement building protection measures as identified in the building protection report to protect the structure from vibration damage. This may include methods such as underpinning, soil grouting, or other forms of ground improvement, as well as lower vibration equipment and/or construction techniques. If the building protection report determines the historic property has the potential to be impacted by differential settlement caused by TBM construction, appropriate building protection measures shall be identified and implemented such as the use of an earth pressure balance or slurry shield TBM. The implementation of the required measures and their effectiveness shall be documented in a post-construction survey. A post-construction survey shall also be undertaken to ensure that damage has not occurred to historic properties. An architectural historian or historical architect who meets the Secretary of the Interior’s Professional Qualification Standards (36 CFR Part 61) shall prepare an assessment of the implementation of the mitigation measures.	Mitigation Measure	No Constructive Use - potential construction effects on the CVS/Golden Gate Theater and other historic properties would be reduced to “no adverse effect” under Section 106 of the National Historic Preservation Act

Source: Metro; CDM Smith/AECOM JV 2026.

5.0 PUBLIC INVOLVEMENT

This chapter provides a summary of the outreach efforts for the Project. History of the Project and the selection process of the Build Alternative are detailed in **Appendix E** (Alternatives Considered and Project Description). Metro's public outreach are summarized in **Appendix Q** (Outreach Report).

5.1 Public Involvement from 2007 through 2024

Metro has implemented a comprehensive outreach program for the Project since 2007. Metro has conducted extensive public outreach for the Project, including community meetings, workshops, open houses, and public hearings throughout each phase of environmental review. A summary of key outreach milestones, agency consultation, public meetings, tribal coordination, and communication strategies during the CEQA process are summarized in **Appendix Q**.

5.2 NEPA Public Outreach

Table 5.1 summarizes Metro's comprehensive outreach program for the Project, starting in 2007 with outreach meetings for an Alternatives Analysis and continuing to the effects related to this EA. **Appendix Q** includes an outline of the objective of the meetings, the target audiences, tools to engage the community, and materials used to facilitate coordination and communication, and postings on Metro's Project website.

Table 5.1 Summary of Public Involvement from 2007-2024

Meeting Series	Meeting Details
2007 Alternative Analysis	▪ November 1 through November 30, 2007 - Public Comment Period ▪ Five early scoping meetings were held between November 8 and 15, 2007 ○ 224 attendees ○ 159 comments received
2008-2009	▪ 12 public meetings were held ○ 550 stakeholders
2010 Draft EIR (CEQA) /EIS (NEPA) Scoping	▪ Notice of Intent/Notice of Preparation was published on January 25, 2010 ▪ Agency and public scoping meetings held between February 18 and February 27, 2010 ○ 300 attendees ○ 527 comments received
2010-2011	▪ 12 community meetings between July 2010 and September 2011 ▪ Included: ○ 5 urban design community workshops ○ 2 community open houses ○ 2 tours of a similar rail transportation network in Portland ○ 1 webinar ○ 2 open houses
2014 Draft EIR (CEQA) /EIS (NEPA) Release and Public Hearings	▪ Notice of Availability was released on August 22, 2014 ▪ 60-day public comment period from August 22 through October 21, 2014 ○ 528 participants; 120 speakers ○ 148 written comments

Meeting Series	Meeting Details
2017 Post Draft EIR (CEQA)/EIS (NEPA) Technical Studies	5 community meetings held between March 28 and June 22, 2016 417 participants; generated 75 comments 5 community meetings held between February 6 and February 17, 2017 318 participants; generated 32 comments 110 briefings throughout the communities surrounding the Project - Hosted 2 tours of Metro facilities and construction sites
2019 Recirculated Draft EIR (CEQA)/Draft Supplemental EIS (NEPA) Scoping	- FTA published a Notice of Intent in the Federal Register on May 29, 2019 - Metro issued a Recirculated Notice of Preparation on May 31, 2019 6 Public Scoping meetings held from June 13 through June 26, 2019 573 participants; 149 speakers 54 written comments and 33 oral testimony comments
2020-2021 Community Update Meetings	3 meetings were held between February 3 and February 8, 2020 234 participants 81 questions/comments 6 meetings were held between August 28 and November 21, 2021 440 participants 4 virtual meetings were conducted, including three presentations tailored to specific communities in November 2021 276 participants 145 comments
CEQA EIR Certification	The Metro Board certified the CEQA EIR and approved the Project on May 23, 2024
2025 NEPA Community Update	- Meetings were held to engage the community members along the Build Alternative's alignment to provide updates and encourage meeting participation. 7 meetings were held between January 17, 2025 to January 28, 2025 884 participants
2025 NEPA	- Although a formal scoping period is not required for an EA under NEPA, four community meetings took place to inform the public of the start of the NEPA process. 3 meetings were held between January 28, 2025 and February 1, 2025 139 participants 49 comments 1 virtual meeting was conducted on February 3, 2025 77 participants 36 comments

CDM Smith/AECOM JV 2025, **Appendix Q**.

Key: CEQA = California Environmental Quality Act, EA = Environmental Assessment, EIR = Environmental Impact Report, EIS = Environmental Impact Statement, NEPA = Nation Environmental Protection Act.

Following the community meetings in 2025, as part of the NEPA process, Metro has conducted additional public outreach efforts such as community pop-up events to keep the public informed and engaged. Comments related to NEPA that were received during the 2022 Recirculated Draft EIR (CEQA) and the 2024 Final EIR (CEQA) comment period were also reviewed and considered during the research and technical analysis during preparation of this EA.

5.3 Agency Consultation

Agency consultations with federal, state, regional and local government agencies with an interest in the Project are summarized in **Table 5.2**.

Table 5.2 Summary of Agency Consultation and Coordination

Agency	Summary of Agency Coordination
United States Environmental Protection Agency	The United States Environmental Protection Agency is a cooperating agency on the Project. Cooperating Agencies are those government and regulatory agencies with jurisdiction by law or special expertise, providing input in the areas that they oversee or by expertise.
California Department of Transportation	The California Department of Transportation is a participating agency for the Project. Participating agencies can be federal, state, tribal, regional, and local government agencies with an interest in the Project.
California State Historic Preservation Officer	As part of the NEPA and Section 106 processes, Metro and FTA are coordinating with the California State Historic Preservation Officer to ensure that potential effects on historic and cultural resources are appropriately identified, evaluated, and mitigated. Additional details are presented in Appendix K .
Local Jurisdictions: Los Angeles County, City of Montebello and City of Commerce	Continued coordination with local jurisdictions related to the development of the Build Alternative, as appropriate.
Regulatory Agencies: Los Angeles Regional Water Quality Control Board, California Department of Fish and Wildlife, and United States Army Corps of Engineers	Continued coordination with regulatory agencies related to the development of the Build Alternative, as appropriate.
Interagency: Los Angeles County Department of Public Works, Southern California Association of Governments, and Gateway Cities Council of Governments	Continued coordination to maintain interagency consistency and communication throughout the environmental review process.

Source: Metro; CDM Smith/AECOM JV 2026.

5.4 Tribal Coordination

FTA and Metro initiated consultation for the Project in 2019 to comply with Section 106 of the National Historic Preservation Act of 1966. In July 2019, FTA and Metro contacted the Native American Heritage Commission via letter and provided a Project description and Study Area map, which included several jurisdictions in the San Gabriel Valley that are outside of the current study area. Coordination is ongoing through 2026. **Table 5.3** provides a chronological summary of the Project's consultation activities, including outreach to tribes identified by the Native American Heritage Commission and responses received during the period of 2019 through May 2026.

Table 5.3 Summary of Tribal Coordination Activities

Date	Consultation Activity	Tribes / Representative / Organization	Response / Outcome
November 22, 2019	Native American Heritage Commission responded and provided an Assembly Bill 52 Tribal contact list (five tribes) and Sacred Lands File search results (positive).	Native American Heritage Commission - Gabrielesño Band of Mission Indians – Kizh Nation (Andrew Salas, Chairperson) - Gabrielesño/Tongva San Gabriel Band of Mission Indians (Anthony Morales, Chairperson) - Gabrielesño/Tongva Nation (Sandonne Goad, Chairperson) - Gabrielesño Tongva Indians of California Tribal Council (Robert Dorame, Chairperson) - Gabrielesño-Tongva Tribe (Charles Alvarez, Chairperson)	Native American Heritage Commission acknowledged receipt. Native American Heritage Commission recommended direct consultation with Kizh Nation and San Gabriel Band. Initiated Assembly Bill 52/Section 106 outreach.
December 3, 2019	FTA issued letters to all five Native American Heritage Commission identified tribes initiating consultation under Assembly Bill 52 and Section 106.	- Gabrielesño Band of Mission Indians – Kizh Nation (Andrew Salas, Chairperson) - Gabrielesño/Tongva San Gabriel Band of Mission Indians (Anthony Morales, Chairperson) - Gabrielesño/Tongva Nation (Sandonne Goad, Chairperson) - Gabrielesño Tongva Indians of California Tribal Council (Robert Dorame, Chairperson) - Gabrielesño-Tongva Tribe (Charles Alvarez, Chairperson)	Initiated consultation under NEPA and CEQA.
December 10, 2019	Response from Andrew Salas (Kizh Nation) requesting formal consultation.	Gabrielesño Band of Mission Indians – Kizh Nation (Andrew Salas, Chairperson)	Tribes requested consultation; meeting held March 25, 2020; provided lineage and cultural resource information incorporated into EA.
March 25, 2020	Consultation meeting held between Metro and Kizh Nation.	Andrew Salas (Chairperson)	Discussion of lineage ties and area of potential effects.
April 27, 2020	Follow-up correspondence providing additional cultural/lineage information.	Gabrielesño Band of Mission Indians – Kizh Nation (Andrew Salas, Chairperson)	Additional documentation received. Incorporated into EA (Native American Heritage Commission).
July 12, 2024	Metro recontacted Native American Heritage Commission with updated Build Alternative description and map.	Native American Heritage Commission	Requested updated Sacred Lands File search and tribal contact list for revised area of potential effects.

Date	Consultation Activity	Tribe / Representative / Organization	Response / Outcome
July 30, 2024	Native American Heritage Commission responded with negative Sacred Lands File results and list of 16 contacts from eight tribes.	▪ Cahuilla Band of Indians (Erica Schenk – Chairperson; Anthony Madrigal – Tribal Historic Preservation Offer; Bobby Ray Esparza, Cultural Director) ▪ Gabrieleño Band of Mission Indians – Kizh Nation (Christina Swindall Martinez, Secretary; Andrew Salas, Chairperson) ▪ Gabrieleño/Tongva San Gabriel Band of Mission Indians (Anthony Morales, Chairperson) ▪ Gabrieleño Tongva Indians of California Tribal Council (Robert Dorame, Chairperson; Christina Conley, Cultural Resources Admin.) ▪ Gabrieleño/Tongva Nation (Sandonne Goad, Chairperson) ▪ Gabrieleño-Tongva Tribe (Charles Alvarez, Chairperson; Sam Dunlap, Cultural Resources Director) ▪ Santa Rosa Band of Cahuilla Indians (Vanessa Minott, Tribal Admin.; Steven Estrada, Chairman) ▪ Soboba Band of Luiseño Indians (Joseph Ontiveros, Tribal Historic Preservation Offer; Jessica Valdez, Cultural Specialist; Isaiah Vivanco, Chairperson) ▪ Yuhaaviatam of San Manuel Nation (Raylene Borrego, Cultural Resources Technician)	Updated contacts identified for Section 106 consultation. Letters issued January 2025.
January 9, 2025	FTA issued Section 106 consultation letters to all Native American Heritage Commission identified tribes.	All 16 Tribal contacts above	Formal consultation invitations sent.
February 3, 2025	Follow-up emails issued by FTA.	All 16 Tribal contacts	Confirmed receipt.
February 13, 2025	Follow-up phone calls by FTA.	All 16 Tribal contacts	Two responses received requesting consultation. Ongoing coordination.
February 8, 2025	Santa Rosa Band of Cahuilla Indians deferred consultation to Yuhaaviatam of San Manuel Nation.	▪ Santa Rosa Band of Cahuilla Indians (Vanessa Minott – Tribal Admin.; Steven Estrada – Tribal Chairman) ▪ Yuhaaviatam of San Manuel Nation (Raylene Borrego, Cultural Resources Technician)	Deferral accepted. FTA initiated contact with Yuhaaviatam.
August 25, 2025	Response received from Yuhaaviatam of San Manuel Nation declining to participate.	Raylene Borrego (Cultural Resources Technician)	Declined consultation. Consultation closed.

Source: CDM Smith/AECOM JV 2025, **Appendix K**.

Summaries of all responses received and follow up actions are described in greater detail in **Appendix K** of this EA. Records for the previous Native American outreach program from the Section 106 consultation in 2019-2020 and 2024-2025 are included in **Attachment B of Appendix K**. The Native American Heritage Commission also identified 16 tribal contacts from eight tribal groups listed in **Table 5.4**, that may have additional data and information regarding tribal cultural resources within or near the area of potential effects.

Table 5.4 Native American Representatives identified by Native American Heritage Commission in 2024

Name	Position	Native American Tribe
Erica Schenk	Chairperson	Cahuilla Band of Indians
Anthony Madrigal	Tribal Historic Preservation Officer	Cahuilla Band of Indians
Bobby Ray Esparza	Cultural Director	Cahuilla Band of Indians
Christina Swindall Martinez	Secretary	Gabrieleño Band of Mission Indians – Kizh Nation
Andrew Salas	Chairperson	Gabrieleño Band of Mission Indians – Kizh Nation
Anthony Morales	Chairperson	Gabrieleño/Tongva San Gabriel Band of Mission Indians
Robert Dorame	Chairperson	Gabrieleño Tongva Indians of California Tribal Council
Christina Conley	Cultural Resources Administrator	Gabrieleño Tongva Indians of California Tribal Council
Sandonne Goad	Chairperson	Gabrieleño/Tongva Nation
Charles Alvarez	Chairperson	Gabrieleño-Tongva Tribe
Sam Dunlap	Cultural Resources Director	Gabrieleño-Tongva Tribe
Vanessa Minott	Tribal Administrator	Santa Rosa Band of Cahuilla Indians
Steven Estrada	Tribal Chairman	Santa Rosa Band of Cahuilla Indians
Joseph Ontiveros	Tribal Historic Preservation Officer	Soboba Band of Luiseño Indians
Jessica Valdez	Cultural Resource Specialist	Soboba Band of Luiseño Indians
Isaiah Vivanco	Chairperson	Soboba Band of Luiseño Indians
Raylene Borrego	Cultural Resources Technician	Yuhaaviatam of San Manuel Nation

Source: CDM Smith/AECOM JV 2025, **Appendix K**.

5.5 Stakeholder Coordination

Metro implemented a robust and comprehensive outreach program to include partnerships with community-based organizations to establish communication and adapt to the communities' needs and participation preferences. More details on community-based organization engagement efforts can be found in the Public Outreach Report (**Appendix Q**).

5.6 NEPA Public Circulation

FTA will consider the comments received on the EA during the 30-day public comment period in its decision document and will provide responses to substantive comments. The EA will be available for review at the following locations:

- Federal Transit Administration, Region 9 Office, 888 South Figueroa Street, Suite 440, Los Angeles, CA 90017
- Metro Headquarters, Dorothy Peyton Gray Transportation Library, One Gateway Plaza, Los Angeles, CA 90012
- East Los Angeles Library, 4837 E 3rd Street, East Los Angeles, CA 90022
- Rosewood Neighborhood Library, 5655 Jillson Street, Commerce, CA 90040
- Chet Holifield County Library, 1060 S Greenwood Avenue, Montebello, CA 90640
- Project Website: https://www.metro.net/projects/eastside_phase2/

Metro will host a round of public hearings including three in-person meetings in the community of East Los Angeles (unincorporated Los Angeles County) and the Cities of Commerce and Montebello, as well as one virtual meeting. Details regarding the public hearings will be available on Metro's Project website: https://www.metro.net/projects/eastside_phase2/. At these public hearings, Metro will provide information about the EA and its findings, as well as an opportunity for the public to provide comments on the EA.