Los Angeles County
Metropolitan Transportation Authority

DRAFT ENVIRONMENTAL IMPACT REPORT

K LINE NORTHERN EXTENSION

Metro

JULY 2024

K LINE NORTHERN EXTENSION TRANSIT CORRIDOR PROJECT

Draft Environmental Impact Report

State Clearinghouse Number: 2021040368

Prepared for:

Metro

Los Angeles County
Metropolitan Transportation Authority

Prepared by:

CONNECT
LOS ANGELES PARTNERS
Creating Connected Communities

888 S. Figueroa Street, Suite 1800
Los Angeles, California 90017

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EXECUTIVE SUMMARY

ES.1 INTRODUCTION

Pursuant to the California Environmental Quality Act (CEQA) Guidelines Section 15123, this Executive Summary provides a synopsis of the Draft Environmental Impact Report (EIR) for the Los Angeles County Metropolitan Transportation Authority (Metro) K Line Northern Extension (KNE) Transit Corridor Project (formerly referred to as the Crenshaw Northern Extension). The Executive Summary includes:

- Purpose of the Draft EIR
- Project summary
- Project background, history, and objectives
- Project description
- Summary of the environmental analysis
- Alternatives to the project
- Public outreach
- Areas of controversy and issues to be resolved
- Next steps

ES.2 PURPOSE OF THE DRAFT ENVIRONMENTAL IMPACT REPORT

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

ES.3 PROJECT SUMMARY

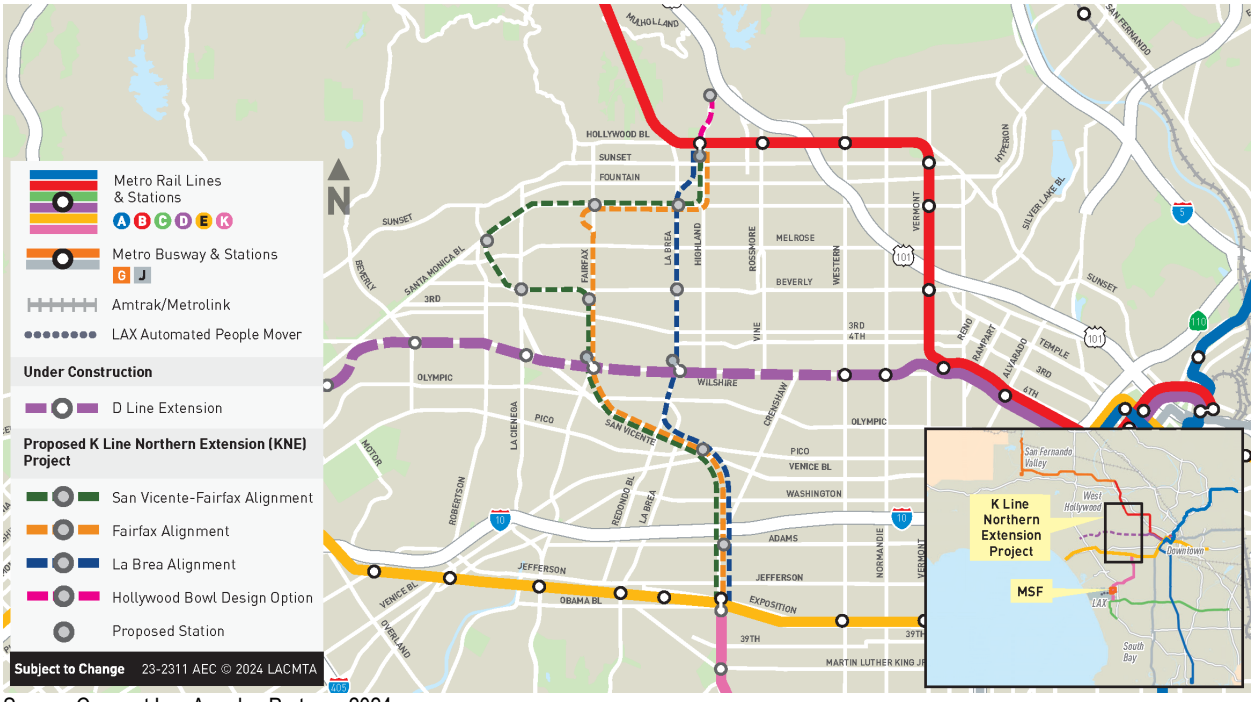
KNE would extend Metro's light rail transit K Line (formerly the Crenshaw/LAX Line) north from the Metro E Line (Expo) to the Metro D Line (Purple) and B Line (Red) heavy rail transit lines (Figure ES-1). The project would serve as a critical regional connection, linking the South Bay, the Los Angeles International Airport (LAX) area, South Los Angeles, Inglewood, and Crenshaw corridor to Mid-City, Central Los Angeles, West Hollywood, and Hollywood, allowing for further connections to the north in the San Fernando Valley via the Metro B Line. The project would:

- Connect major activity centers as well as areas of high population and employment density
- Expand mobility with a fast and reliable rail option by providing approximately 47,200 to 59,700 daily trips

- Attract new riders by serving approximately 11,400 to 15,100 new transit riders daily
- Reduce auto use by approximately 127,500 to 135,500 vehicle miles traveled daily
- Create jobs (8,300 to 10,100 jobs estimated during construction)

The project would be approximately six to ten miles long (depending on the alignment) and would be constructed as funding becomes available and consistent with the Measure M Expenditure Plan, which identifies 2041 as a ground-breaking date. Metro is advancing the Draft EIR under CEQA to inform the selection of a Locally Preferred Alternative based on local efforts to explore potential financing strategies to accelerate the project per the Measure M Early Project Delivery Strategy.

FIGURE ES-1. K LINE NORTHERN EXTENSION (KNE)

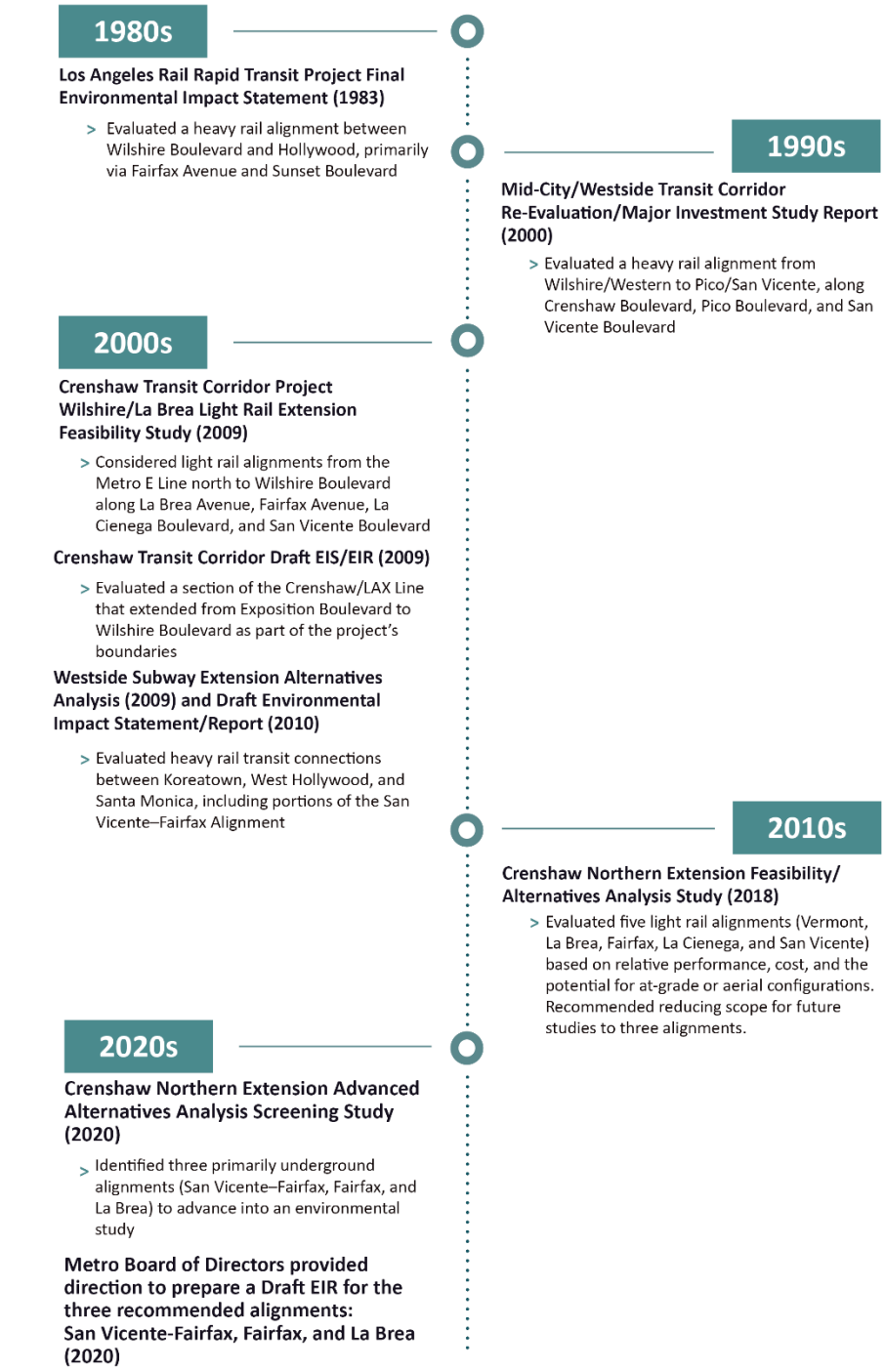


Source: Connect Los Angeles Partners 2024

ES.3.1 PROJECT BACKGROUND AND HISTORY

Over the past decade, Metro has documented the clear need for a north-south light rail line in the Central Los Angeles vicinity to address high travel demand and alleviate congestion throughout the area, which includes some of the busiest destinations and employment centers in Southern California. The studies identified on the following page addressed various rail alternatives and extensions previously evaluated in other Metro documents. Figure ES-2 presents a timeline of the prior studies and reports prepared for the project. A more detailed summary is available in Appendix 2-A, Alternatives Considered but Withdrawn from Further Evaluation.

FIGURE ES-2. TIMELINE OF PRIOR STUDIES AND REPORTS



Source: Connect Los Angeles Partners 2024

ES.3.2 PROJECT OBJECTIVES

As described in Chapter 2 of the Draft EIR, the objectives of the project are as follows:

- Leverage the high-volume east-west rail network to provide new north-south connections and close a regional network gap between the Metro K, E, D, and B Lines
- Increase the efficiency and convenience of transit trips by providing faster and more direct service, in turn creating more connections and mobility options
- Reduce vehicle miles traveled and greenhouse gas emissions by providing an alternative to congested roadways by offering high-capacity, grade-separated transit to meet existing and growing demand
- Maximize access to jobs, housing, and opportunity through the implementation of frequent and reliable rail service
- Improve mobility for transit-dependent residents by providing alternatives to congestion with efficient transit service and a cohesive high-capacity and high-speed transit network

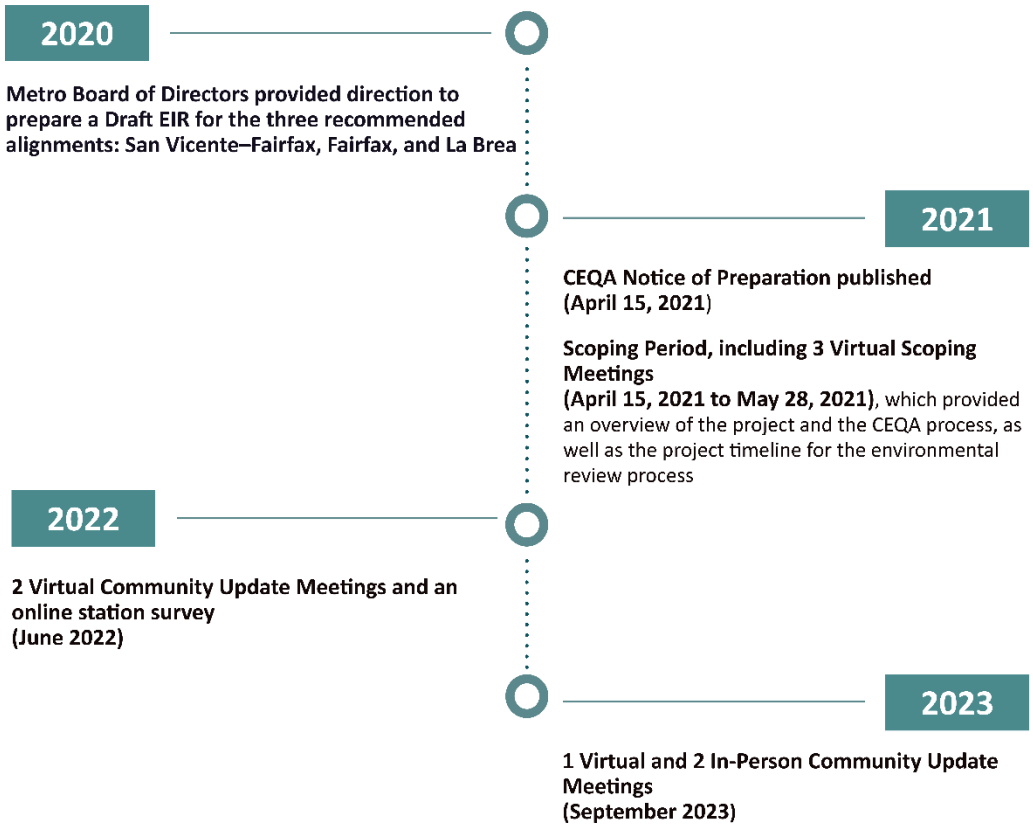
ES.3.3 ENVIRONMENTAL REVIEW PROCESS

Pursuant to CEQA, Metro issued a Notice of Preparation (NOP) for this Draft EIR on April 15, 2021. The purpose of the NOP was to notify interested agencies and parties, local jurisdictions, community organizations, and interested residents (collectively, interested parties) of the preparation of the Draft EIR. The NOP, as well as the scoping comment letters and verbal comments, are included in Appendix 1-A, Scoping Summary Report.

ES.3.3.1 PROJECT TIMELINE

Figure ES-3 presents a timeline of the environmental review process and public outreach activities for the project prior to release of the Draft EIR.

FIGURE ES-3. PROJECT TIMELINE



Source: Connect Los Angeles Partners 2024

ES.4 PROJECT DESCRIPTION

KNE would provide a northern extension of the Metro K Line from its current terminus at the Metro E Line Expo/Crenshaw Station to the Metro D Line at Wilshire Boulevard and terminate at either the Metro B Line Hollywood/Highland Station or the optional Hollywood Bowl Station. The Draft EIR evaluates three alignments, described in the following pages from west to east: the San Vicente–Fairfax Alignment, the Fairfax Alignment, and the La Brea Alignment. The alignments would operate entirely underground with the exception of the stations, which would provide access at the surface (streets) via station (portal) entrances. Previous studies evaluated the feasibility of constructing and operating aerial or at-grade light rail segments, which were screened from further study due to physical constraints and other challenges and thus not evaluated in the Draft EIR. The findings from past studies are summarized in Appendix 2-A, Alternatives Considered but Withdrawn from Further Consideration.

The Hollywood Bowl Design Option would extend the alignments farther north to an alternate terminus station at the Hollywood Bowl. KNE would expand the existing Division 16 maintenance yard footprint near LAX to support operation of the project. The maintenance and storage facility (MSF) expansion and improvements would be above ground.

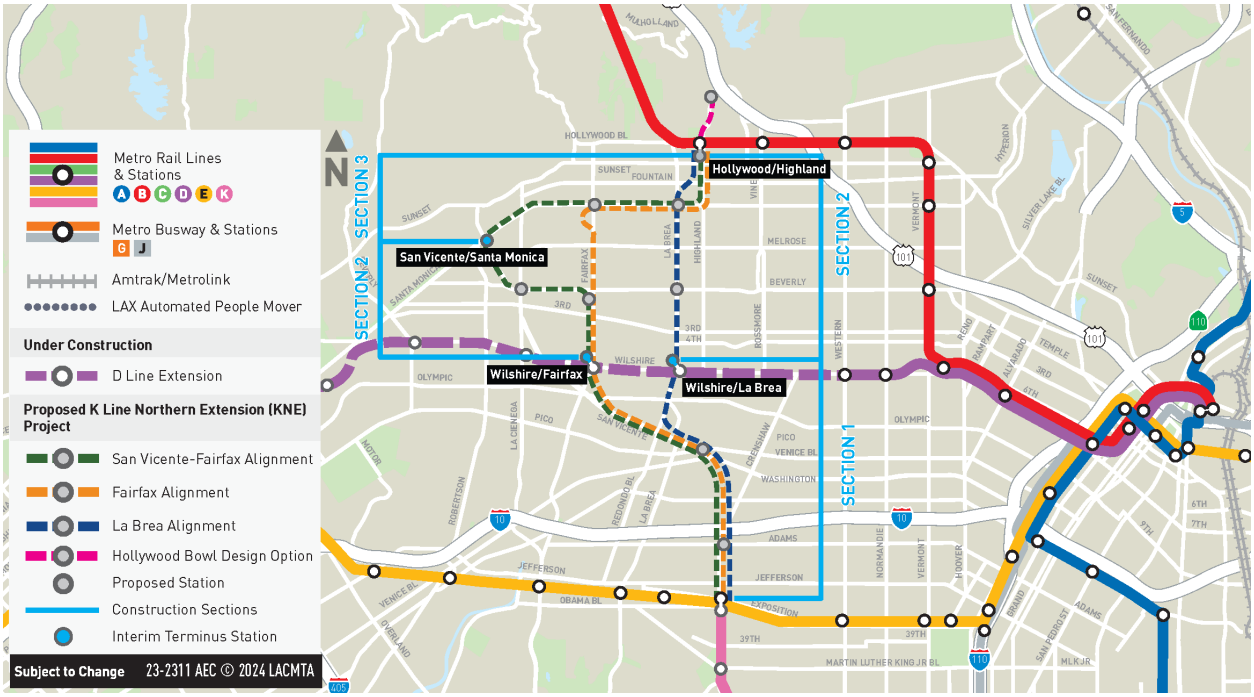
As shown in Figure ES-4 and Table ES-1, the project would be constructed in sections that would be built sequentially, depending on funding and how the construction is contracted. The first section would connect the Metro E Line to the Metro D Line. Sections 2 and 3 (depending on the alignment) would connect the Metro D Line to the Metro B Line with a design option that extends to the Hollywood Bowl.

For the purposes of CEQA, a Draft EIR must identify a proposed project. The Fairfax Alignment is the proposed project in the Draft EIR because it is the alignment that has been historically studied and advanced over time, dating back to the 1983 Los Angeles Rail Rapid Transit Project. This term does not, however, convey any preference or recommendation as to the alignment or design option, and all three alignments are evaluated equally. Following the completion of the public comment period on the Draft EIR, Metro staff will prepare a recommendation for the Metro Board to consider in the selection of a Locally Preferred Alternative based on findings from the Draft EIR, public comments made during the comment period, technical analysis, stakeholder input, and other factors, such as project objectives, cost, and ridership. The Metro Board will vote at a public meeting to select a Locally Preferred Alternative.

Discussion and analysis of KNE is organized as follows:

- Alignments
  - San Vicente–Fairfax Alignment
  - Fairfax Alignment
  - La Brea Alignment
- Hollywood Bowl Design Option
- MSF

FIGURE ES-4. KNE CONSTRUCTION SECTIONS



Source: Connect Los Angeles Partners 2024
Note: If selected, the Hollywood Bowl Design Option would be constructed as part of Section 3 for the KNE San Vicente–Fairfax Alignment or part of Section 2 for the KNE Fairfax or La Brea Alignments.

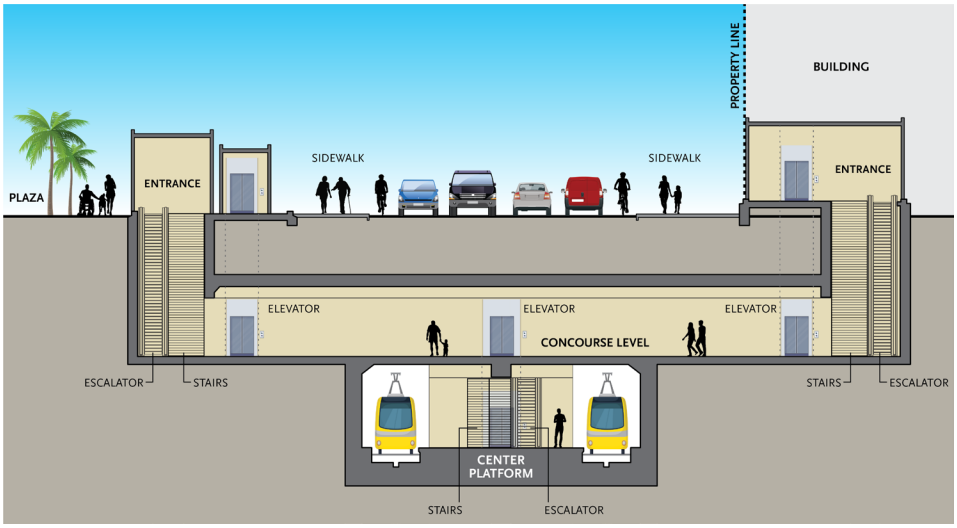
TABLE ES-1. CHARACTERISTICS OF KNE

	SAN VICENTE–FAIRFAX ALIGNMENT	FAIRFAX ALIGNMENT	LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION
Alignment length	9.7 miles underground	7.9 miles underground	6.2 miles underground	+ 0.8 mile underground
Construction sections	3	2	2	Concurrent with final section
Stations	9 underground	7 underground	6 underground	+1 underground
Travel time between Expo/Crenshaw and Hollywood/Highland Stations	19 minutes	15 minutes	12 minutes	+2 minutes (from Hollywood/Highland)
MSF	Expansion of Division 16			

Source: Connect Los Angeles Partners 2024
MSF = maintenance and storage facility

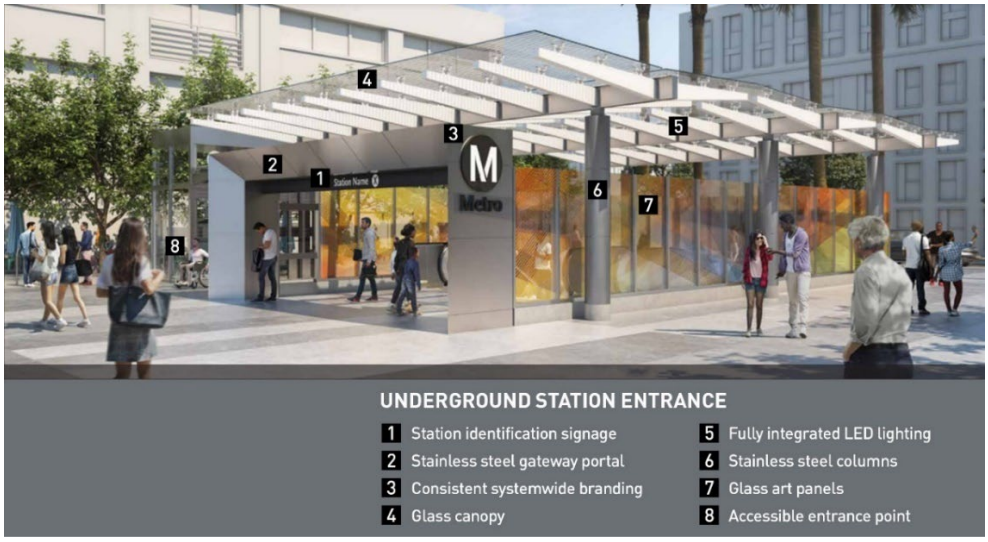
All three light rail alignments described below would travel underground in tunnels, primarily beneath public streets. However, in some areas where the tunnels turn, they would be approximately 40 to 100 feet below private property. Proposed station entrances would be located off-street on private property (Figure ES-5) and would include a station "portal" entrance that is consistent with Metro's kit-of-parts station design (Figure ES-6). Appendix 2-B includes advanced conceptual engineering drawings that identify the plan and profile of light rail tunnels, station entrances, construction staging sites, and other ancillary equipment such as ventilation shafts and emergency exits that are located at street level.

FIGURE ES-5. TYPICAL UNDERGROUND STATION CONFIGURATION



Source: Connect Los Angeles Partners 2024
Note: One entrance for each station is assumed in the Draft EIR. Stations could be located in a plaza or integrated into a building.

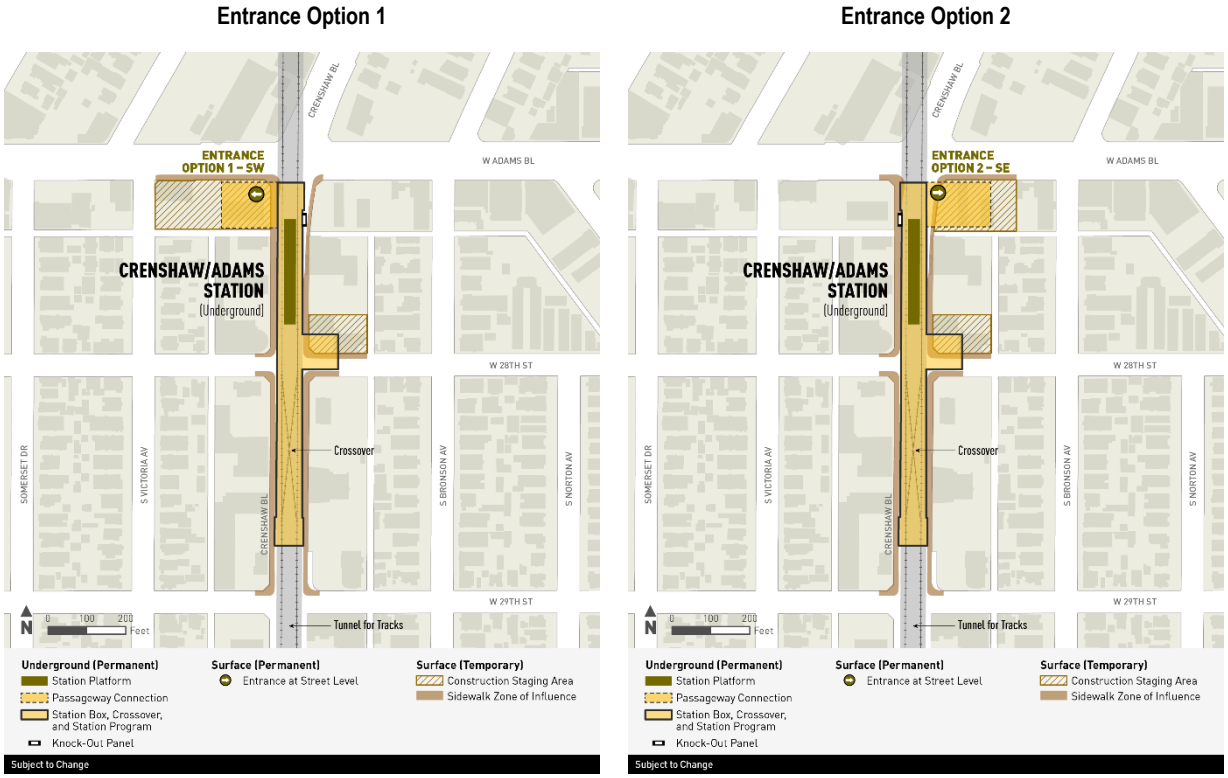
FIGURE ES-6. TYPICAL STATION ENTRANCE



Source: Metro 2022

Chapter 2 of the Draft EIR provides further information about project elements, including stations. Each station includes an entrance, which leads to an underground platform (typically located under the street). Descriptions and layout diagrams of each station are provided in Chapter 2. Examples of station diagrams are provided in Figure ES-7 for the Crenshaw/Adams Station. The two diagrams show two potential configurations for a station and identify where the station entrance, platform, knock-out panels to allow for future entrances, and other facilities are located. The diagrams also identify sites needed to construct the station. As with the Crenshaw/Adams Station, many stations have multiple options for station entrances and construction staging, which are included in the Draft EIR analysis, but not all of which may be built and used. For the purposes of the Draft EIR, it is assumed that each station would have one entrance. Table ES-2 shows the stations that would be constructed for each alignment.

FIGURE ES-7. EXAMPLE STATION LAYOUT (CRENSHAW/ADAMS STATION)



Source: Connect Los Angeles Partners 2024

TABLE ES-2. STATIONS BY ALIGNMENT

	SAN VICENTE–FAIRFAX ALIGNMENT	FAIRFAX ALIGNMENT	LA BREA ALIGNMENT
Crenshaw/Adams (City of Los Angeles)	●	●	●
Midtown Crossing (San Vicente/Pico/Venice) (City of Los Angeles)	●	●	●
Wilshire/Fairfax (City of Los Angeles)	●	●	
Fairfax/3rd (City of Los Angeles)	●	●	
La Cienega/Beverly (City of Los Angeles)	●		
San Vicente/ Santa Monica (City of West Hollywood)	●		
Fairfax/Santa Monica (City of West Hollywood)	●	●	
La Brea/ Santa Monica (City of West Hollywood)	●	●	●
Hollywood/Highland (City of Los Angeles)	●	●	●
Wilshire/La Brea (City of Los Angeles)			●
La Brea/Beverly (City of Los Angeles)			●
Total Stations	9 (6 in City of Los Angeles, 3 in City of West Hollywood)	7 (5 in City of Los Angeles, 2 in City of West Hollywood)	6 (5 in City of Los Angeles, 1 in City of West Hollywood)

Source: Connect Los Angeles Partners 2024

ES.4.1 SAN VICENTE–FAIRFAX ALIGNMENT

The San Vicente–Fairfax Alignment would extend the existing K Line underground by approximately 9.7 miles north from the Metro E Line to the Metro D and B Lines. This alignment would be the longest of the three alignments and would have nine new stations. The San Vicente–Fairfax Alignment would serve destinations throughout west and central Los Angeles, including the Midtown Crossing Shopping Center, the Los Angeles County Museum of Art (LACMA), the Original Farmers Market/the Grove, Cedars-Sinai Medical Center, the commercial districts along Santa Monica Boulevard in West Hollywood, and Hollywood. The San Vicente–Fairfax Alignment would connect to the Metro D Line at the Wilshire/Fairfax

Station (under construction) and the Metro B Line at the existing Hollywood/Highland Station. At both transfer locations, the project would include a new station entrance.

ES.4.2 FAIRFAX ALIGNMENT

The Fairfax Alignment would extend the existing K Line underground by approximately 7.8 miles north from the Metro E Line to the Metro D and B Lines. The Fairfax Alignment would have seven new stations and would serve the following destinations: the Midtown Crossing Shopping Center, LACMA, the Original Farmers Market/the Grove, commercial districts along Santa Monica Boulevard in West Hollywood between Fairfax Avenue and La Brea Boulevard, and Hollywood. The Fairfax Alignment would connect to the Metro D Line at the Wilshire/Fairfax Station (under construction) and the Metro B Line at the existing Hollywood/Highland Station. At both transfer locations, the project would include a new station entrance.

ES.4.3 LA BREA ALIGNMENT

The La Brea Alignment would extend the existing K Line underground by approximately 6.2 miles north from the Metro E Line to the Metro D and B Lines and would have six new stations. The La Brea Alignment is the shortest of the three alignments and would serve the following destinations: Midtown Crossing Shopping Center, Miracle Mile, Hancock Park, and Hollywood. The La Brea Alignment would connect to the Metro D Line at the Wilshire/La Brea Station (under construction) and the Metro B Line at the Hollywood/Highland Station. At both transfer locations, the project would include a new station entrance.

ES.4.4 HOLLYWOOD BOWL DESIGN OPTION

For all three alignments, an alternate terminus station at the Hollywood Bowl is under consideration. The design option would add one new station, the Hollywood Bowl Station, and the associated underground track alignment. This station would serve the Hollywood Bowl venue and would tunnel beneath Highland Avenue for an additional 0.8 mile from the Hollywood/Highland Station to the tail tracks north of the Hollywood Bowl Station.

If it were to be built, the Hollywood Bowl Design Option would be constructed during the final construction section at the same time as the Hollywood/Highland Station, which is the northern terminus station for KNE without the design option, and would not require an additional construction phase.

ES.4.5 MAINTENANCE AND STORAGE FACILITY

An MSF is necessary to provide daily servicing and cleaning, inspection and repairs, and storage of light rail vehicles. The proposed MSF under KNE is a 16.1-acre expansion of the existing Metro Division 16 Maintenance Yard site located near LAX in the City of Los Angeles. The MSF would allow Metro to maintain all its operations for the K Line within one site and would avoid duplication of facilities. In addition to the existing facilities at Division 16, the proposed MSF expansion would include a new service and inspection shop, cleaning platform, maintenance-of-way facility, storage tracks, parking spaces, and systems components. The MSF expansion would be constructed as part of Section 2 of each alignment based on required light rail vehicle maintenance and storage. To accommodate the additional trains needed to operate the extension to Wilshire Boulevard and the D Line (Section 1), additional storage tracks would be added within the existing Division 16 site.

ES.5 ENVIRONMENTAL ANALYSIS

This Draft EIR identifies potential environmental impacts of the alignments and stations, design option, and MSF, and discusses mitigation measures that would avoid or substantially reduce significant impacts to less than significant levels, where feasible. Mitigation measures are required where significant impacts have been identified based on the impact analyses for construction or operation of the project. If mitigation measures cannot reduce a significant impact to a less than significant level, an impact is identified as significant and unavoidable.

Table ES-3 provides an overview of the environmental resources where impacts have been identified and their level of significance. Chapter 3 of the Draft EIR provides a detailed analysis of impacts by environmental resource, applicable mitigation measures, and level of significance after mitigation.

TABLE ES-3. ENVIRONMENTAL RESOURCE IMPACT CONCLUSIONS BY LEVEL OF IMPACT

LEVEL OF IMPACT	ENVIRONMENTAL RESOURCE – CONSTRUCTION	ENVIRONMENTAL RESOURCE – OPERATIONS
No Impact/Less than Significant Impact	• Aesthetics • Air Quality • Communities, Population, and Housing • Energy • Geology and Soils • Greenhouse Gas Emissions • Growth Inducing Impacts • Hydrology and Water Quality • Land Use and Planning • Transportation • Utilities and Service Systems	• Aesthetics • Air Quality • Biological Resources • Communities, Population, and Housing • Cultural and Paleontological Resources • Energy • Geology and Soils • Greenhouse Gas Emissions • Growth Inducing Impacts • Hydrology and Water Quality • Land Use and Planning • Noise and Vibration • Public Services and Recreation • Transportation and Traffic • Tribal Cultural Resources • Utilities and Service Systems
Less than Significant Impact with Mitigation	• Biological Resources • Hazards and Hazardous Materials • Noise and Vibration • Public Services and Recreation • Tribal Cultural Resources	• Hazards and Hazardous Materials
Significant and Unavoidable Impact	• Cultural and Paleontological Resources	None

Source: Connect Los Angeles Partners 2024

The following list presents a summary of applicable mitigation measures for those resource areas that have a less than significant impact with mitigation or a significant and unavoidable impact. Unless noted below, the mitigation measures apply to the three alignments, design option, and MSF. These are discussed in greater detail for each environmental resource in Chapter 3.

- Biological Resources (Construction)
  - MM BIO-1: Minimize Impacts to Migratory Nesting Birds
  - MM BIO-2: Minimize Impacts to Protected Trees
- Cultural Resources (Construction)
  - MM CUL-1: Building Protection Measures (not required for MSF)
  - MM CUL-2: Vibration Protection Measures (not required for MSF)
  - MM CUL-3: Archival Documentation (not required for Hollywood Bowl Design Option or MSF)
  - MM CUL-4: Interpretive Program (not required for Hollywood Bowl Design Option or MSF)

- ► MM CUL-5: Cultural Resources Monitoring and Mitigation Plan
- ► MM CUL-6: Cultural Resource Training (not required for MSF)
- ► MM CUL-7: Archaeological Monitoring (not required for MSF)
- ► MM CUL-8: Native American Monitoring (not required for MSF)
- ► MM CUL-9: Discovery of Human Remains

- Hazards and Hazardous Materials (Construction and Operation)
  - ► MM HAZ-1: Minimize Hazards Near Schools (not required for MSF)
- Noise and Vibration (Construction)
  - ► MM NOI-1: Noise Control Plan (not required for MSF)
- Paleontological Resources (Construction)
  - ► MM PAL-1: Paleontological Resources Monitoring and Mitigation Plan
  - ► MM PAL-2: Worker Education
  - ► MM PAL-3: Paleontological Monitoring
- Public Services and Recreation (Construction)
  - ► MM PUB-1: Relocation for West Hollywood Sheriff's Station (San Vicente–Fairfax Alignment only)
- Tribal Cultural Resources (Construction)
  - ► MM TCR-1: Cultural Resources Identification Training
  - ► MM TCR-2: Native American Consultation

ES.5.1 SIGNIFICANT AND UNAVOIDABLE IMPACTS

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

Construction: Significant and unavoidable impacts for cultural resources and paleontological resources were identified for the following components of KNE during construction:

- San Vicente–Fairfax Alignment
  - ► Impact CUL-1: Demolition of up to four (4) historic buildings near Hollywood/Highland Station and one (1) historic building near San Vicente/Santa Monica Station
  - ► Impact PAL-1: Potential to impact a unique paleontological resource, site, or unique geologic feature during tunneling

- Fairfax Alignment
  - Impact CUL-1: Demolition of up to four (4) historic buildings near Hollywood/Highland Station
  - Impact PAL-1: Potential to impact a unique paleontological resource, site, or unique geologic feature during tunneling
- La Brea Alignment
  - Impact CUL-1: Demolition of up to four (4) historic buildings near Hollywood/Highland Station
  - Impact PAL-1: Potential to impact a unique paleontological resource, site, or unique geologic feature during tunneling
- Hollywood Bowl Design Option
  - Impact PAL-1: Potential to impact a unique paleontological resource, site, or unique geologic feature during tunneling

No significant and unavoidable impacts were identified for the MSF.

Operations: All potential impacts can be mitigated to a less than significant level or result in no impact during operations for all three alignments, the design option, and the MSF.

ES.6 PROJECT ALTERNATIVES

CEQA Guidelines Section 15126.6(c) requires that a reasonable range of alternatives to the proposed project be considered that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially reduce significant impacts associated with the project.

The Draft EIR evaluates three light rail alignments, including the Fairfax Alignment (proposed project). Two alternatives to the KNE light rail extension project are evaluated in the Draft EIR per CEQA Guidelines: the No Project Alternative and the High Frequency Bus Alternative. The No Project Alternative is required by CEQA and assumes that Metro would not build the project. The High Frequency Bus Alternative represents an alternative to a light rail extension that could fulfill some of the project objectives. It proposes a rapid bus service line that would operate on streets and provide connections between the Metro K, E, D and B Lines. The No Project and High Frequency Bus Alternatives are summarized below and described in more detail in Chapter 5, Comparison of Alternatives.

ES.6.1 ALTERNATIVES TO THE PROPOSED PROJECT

ES.6.1.1 NO PROJECT ALTERNATIVE

The No Project Alternative assumes that Metro would not implement the project. The No Project Alternative provides a comparison of impacts that would occur without a KNE light rail project, evaluated within the context of existing and foreseeable transit enhancements, and includes capital and operational transportation improvements. The No Project Alternative assumes only currently planned and funded projects would be implemented, exclusive of KNE, and identifies impacts that would reasonably be expected to occur in the foreseeable future.

The No Project Alternative would maintain existing transit service, and no new transportation infrastructure would be built beyond transit and highway projects that have been committed to and identified in the Metro 2020 Long Range Transportation Plan (LRTP) (Metro 2020c) and the Southern California Association of Governments (SCAG) 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (SCAG 2020), as well as additional projects funded by the Measure M sales tax initiative, approved by voters in November 2016. A full list of transit and highway projects identified in the Metro LRTP and SCAG 2020-2045 RTP/SCS, and in the vicinity of the project, is included in Chapter 5, Comparison of Alternatives.

ES.6.1.2 HIGH FREQUENCY BUS ALTERNATIVE

The High Frequency Bus (HFB) Alternative consists of a Metro implemented and operated rapid bus service instead of a light rail extension to connect the terminus of the Metro K Line at the Expo/Crenshaw Station to the Metro D Line at the Wilshire/La Brea Station and the Metro B Line at the Hollywood/Highland Station via Crenshaw Boulevard, Venice Boulevard, San Vicente Boulevard, La Brea Avenue, Hollywood Boulevard, Highland Avenue, and Sunset Boulevard (Figure ES-8). The HFB Alternative would operate on La Brea Avenue because La Brea Avenue is the shortest route to connect the Metro K, E, D, and B Lines and has some existing and planned bus infrastructure. There would be 12 bus stops between Exposition Boulevard and Hollywood/Highland, with approximately 0.5-mile spacing consistent with Metro guidelines for station spacing in urban corridors for bus rapid transit. Three of the 12 bus stops would be located at Metro rail stations to connect to the Metro K, E, D, and B Lines.

FIGURE ES-8. HIGH FREQUENCY BUS ALTERNATIVE

Source: Connect Los Angeles Partners 2024

The HFB Alternative would operate as a rapid bus service with some bus rapid transit characteristics, including headways similar to those proposed for light rail (five-minute peak-period headways) and no dedicated lanes with the exception of where they already exist along La Brea Avenue north of Olympic Boulevard and where they are planned for Hollywood Boulevard and La Brea Avenue south of Olympic Boulevard.

Construction and operation of the HFB Alternative would be within the public right-of-way and would include minor improvements such as travel lane restriping, curb extensions, elimination of street parking, and bus stop amenities, where feasible. The HFB Alternative would not require a separate maintenance facility, as buses would use and be maintained at existing Metro facilities.

ES.6.2 COMPARISON OF ALTERNATIVES

Table ES-4 summarizes the impacts of the No Project Alternative and the HFB Alternative and compares them to the three rail alignments.

As shown in the table and described in detail in Chapter 5, Comparison of Alternatives, the No Project Alternative avoids significant construction-related impacts associated with the rail alignments. However, it would have significant and unavoidable long-term impacts for air quality, greenhouse gas emissions, land use and planning, and transportation related to inconsistency with the SCAG 2020-2045 RTP/SCS and Metro's LRTP, which are local transportation plans that assume KNE would be constructed and operated.

The HFB Alternative would have either no impact or less than significant impacts for all environmental resources during construction and operations. However, the HFB Alternative would not have the same capacity to carry passengers or to reduce travel times as the KNE light rail alignments, which are critical to shift people from traveling via vehicles to transit to reduce greenhouse gas emissions, air pollutants, and energy use, and to expand access. Thus, the HFB Alternative does not have the same ability to fully meet the project objectives compared to any of the rail alignments.

TABLE ES-4. IMPACT SIGNIFICANCE CONCLUSIONS COMPARISON OF PROJECT AND ALTERNATIVES TO THE PROJECT

		RAIL ALIGNMENTS AND FACILITIES					NO TRANSIT	BUS TRANSIT
		SAN VICENTE–FAIRFAX ALIGNMENT	FAIRFAX ALIGNMENT (PROPOSED PROJECT)	LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MSF REQUIREMENTS	NO PROJECT ALTERNATIVE	HIGH FREQUENCY BUS ALTERNATIVE
Aesthetics	Construction	LTS	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	LTS	LTS
Air Quality	Construction	LTS	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	**Significant and Unavoidable**	LTS
Biological Resources	Construction	LTS	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	No Impact	LTS
Communities, Population and Housing	Construction	LTS	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	LTS	LTS
Cultural Resources	Construction	**Significant and Unavoidable**	**Significant and Unavoidable**	**Significant and Unavoidable**	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	No Impact	No Impact	LTS
Paleontological Resources	Construction	**Significant and Unavoidable**	**Significant and Unavoidable**	**Significant and Unavoidable**	**Significant and Unavoidable**	LTS	LTS	LTS
	Operation	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact	LTS
Energy	Construction	LTS	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	LTS	LTS
Geology and Soils	Construction	LTS	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	No Impact	LTS

		RAIL ALIGNMENTS AND FACILITIES					NO TRANSIT	BUS TRANSIT
		SAN VICENTE–FAIRFAX ALIGNMENT	FAIRFAX ALIGNMENT (PROPOSED PROJECT)	LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MSF REQUIREMENTS	NO PROJECT ALTERNATIVE	HIGH FREQUENCY BUS ALTERNATIVE
Greenhouse Gas Emissions	Construction	LTS	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	**Significant and Unavoidable**	LTS
Growth Inducing Impacts	Construction	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
	Operation	LTS	LTS	LTS	LTS	No Impact	LTS	No Impact
Hazards and Hazardous Materials	Construction	LTS	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	No Impact	LTS
Hydrology and Water Quality	Construction	LTS	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	LTS	LTS
Land Use and Planning	Construction	LTS	LTS	LTS	LTS	LTS	No Impact	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	**Significant and Unavoidable**	LTS
Noise and Vibration	Construction	LTS	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	LTS	No Impact
Public Services and Recreation	Construction	LTS	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	LTS	LTS
Transportation	Construction	LTS	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	**Significant and Unavoidable**	LTS
Tribal Cultural Resources	Construction	LTS	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact

		RAIL ALIGNMENTS AND FACILITIES					NO TRANSIT	BUS TRANSIT
		SAN VICENTE–FAIRFAX ALIGNMENT	FAIRFAX ALIGNMENT (PROPOSED PROJECT)	LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MSF REQUIREMENTS	NO PROJECT ALTERNATIVE	HIGH FREQUENCY BUS ALTERNATIVE
Utilities and Service Systems	Construction	LTS	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	LTS	LTS

Source: Connect Los Angeles Partners 2024
LTS = less than significant; MSF = maintenance and storage facility
Note 1: MSF is a required element of all rail alignments
Note 2: The impact significance conclusions presented for the San Vicente–Fairfax, Fairfax, and La Brea Alignments, the Hollywood Bowl Design Option, and MSF are summaries of the most conservative post-mitigation impact conclusions. Refer to Chapter 3 for all pre-mitigation impact conclusions and relevant mitigation measures for each environmental resource.

ES.6.3 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA Guidelines Section 15126.6(e)(2) requires that the Draft EIR identify an "environmentally superior" alternative. The environmentally superior alternative is the alternative that would be expected to generate the fewest adverse environmental impacts. If the environmentally superior alternative is the No Project Alternative, the Draft EIR shall also identify an environmentally superior alternative among the other alternatives.

As shown in Table ES-4, the No Project Alternative would avoid the construction identified for the project, but it would have significant and unavoidable impacts during operation related to air quality, greenhouse gas emissions, land use and planning, and transportation because it would conflict with regional plans and programs, such as the Metro 2020 LRTP and SCAG 2020-2045 RTP/SCS, which assume the project would be built and operational.

Construction and operation of the HFB Alternative would result in either no impact or less than significant impacts for all environmental resources identified in this Draft EIR. Therefore, the HFB Alternative is the environmentally superior alternative. However, the HFB Alternative would not realize the same level of benefits as the project in terms of a reduction in vehicle miles traveled, air quality improvements, reductions in greenhouse gas emissions, energy savings, passenger volumes, and travel time reductions.

ES.7 PUBLIC OUTREACH

Starting in 2021, Metro implemented a comprehensive outreach program for the project. The outreach program has focused on disseminating information about the project, garnering public input, and supporting the required technical and legal environmental processes.

Metro provided community updates on the project and received input through multiple virtual and in-person meetings, including stakeholder and community briefings, public open house meetings, online materials, emails, letters, voicemails, and participation in public events. Table ES-5 outlines the public in-person open house meetings that have occurred since scoping was initiated. Refer to Chapter 6, Public Outreach, for detailed information on stakeholder coordination and outreach efforts for the project.

TABLE ES-5. PUBLIC OUTREACH MEETINGS FOR THE PROJECT

	SPRING 2021 VIRTUAL SCOPING MEETINGS	JUNE 2022 COMMUNITY UPDATE MEETINGS	SEPTEMBER 2023 COMMUNITY UPDATE MEETINGS
Number of meetings	3	2	3
Dates	April 29, 2021 May 6, 2021 May 8, 2021	June 16, 2022 June 21, 2022	September 19, 2023 September 23, 2023 September 26, 2023
Format	Virtual	Virtual	Virtual, In-Person
Total participants	421	236	267

Source: Connect Los Angeles Partners 2024

ES.8 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

ES.8.1 AREAS OF CONTROVERSY

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

- Project funding and timeline
- Effects to local businesses during construction
- Traffic changes due to lane and road closures during construction
- Noise levels and air quality during construction
- Security and safety at stations

ES.8.2 ISSUES TO BE RESOLVED

CEQA Guidelines Section 15123(b)(3) requires a discussion of issues to be resolved, including Metro Board selection and approval of a project alignment called the Locally Preferred Alternative, and how Metro will mitigate significant impacts. Upon completion of project CEQA review, the Metro Board will consider approval of the Mitigation Monitoring and Reporting Plan. The plan will address mitigation measures that will apply to the alignment selected by the Metro Board as the Locally Preferred Alternative and are required to reduce identified significant impacts to a less than significant level for:

- Biological Resources
- Cultural Resources
- Hazards and Hazardous Materials
- Noise and Vibration
- Paleontological Resources
- Public Services and Recreation
- Tribal Cultural Resources

Additionally, the Metro Board will determine whether to adopt a Statement of Overriding Considerations for significant and unavoidable impacts related to cultural and paleontological resources.

ES.9 NEXT STEPS

Upon completion of the Draft EIR public review period and review of public and agency comments, the Metro Board will consider selection of a preferred alignment or Locally Preferred Alternative. Public and agency comments received on this Draft EIR will be considered as part of the selection process for the Locally Preferred Alternative, and written responses to comments would be included in a Final EIR.

CHAPTER 1 INTRODUCTION

The Los Angeles County Metropolitan Transportation Authority (Metro) has prepared this Draft Environmental Impact Report (Draft EIR) for the K Line Northern Extension Project (project). As described in Chapter 2 of this Draft EIR, Metro initiated work to consider extending the light rail transit K Line (formerly the Crenshaw/LAX Line) north from the Metro E Line (Expo) to the Metro D Line (Purple) and B Line (Red) heavy rail transit lines. This Draft EIR has been prepared in conformance with the California Environmental Quality Act of 1970 (CEQA) (California Public Resources Code Section 21000 et seq., as amended) and its implementing guidelines (California Code of Regulations, Title 14, Section 15000 et seq.). Metro is the Lead Agency for the project under CEQA.

1.1 PURPOSE OF THIS DRAFT ENVIRONMENTAL IMPACT REPORT

The proposed project requires the discretionary approval of the Metro Board of Directors (Metro Board). Therefore, the proposed project is subject to the environmental review requirements of CEQA. In accordance with Section 15121 of the CEQA Guidelines, the purpose of this Draft EIR is as follows:

- To satisfy the requirements of CEQA and the CEQA Guidelines
- To inform public agency decision-makers and the public of the significant environmental effects of the project and possible ways to minimize those significant effects
- To enable Metro to consider environmental consequences when deciding whether to approve the proposed project, including which alignment to approve

Section 15367 of the CEQA Guidelines defines the Lead Agency as the public agency that has the principal responsibility for executing or approving a project. The Lead Agency is charged with the duty to avoid or substantially lessen significant environmental impacts of a project, where feasible. The Lead Agency also has an obligation to balance the economic, social, technological, legal, and other benefits of a project against its significant and unavoidable impacts on the environment. In accordance with Section 15051 of the CEQA Guidelines, Metro serves as the Lead Agency for the proposed project.

This Draft EIR is a Project EIR as defined by Section 15121 of the state CEQA Guidelines and serves as an informational document for the general public and project decision-makers. This Draft EIR is designed to:

- Identify significant direct, indirect, and cumulative impacts of the project on the environment
- Indicate the manner in which those significant impacts can be minimized with mitigation measures
- Identify reasonable and potentially feasible alternatives to the project that would avoid or reduce the significant impacts
- Identify any significant and unavoidable impacts

When environmental impacts cannot be mitigated to a less than significant level, the impacts are considered significant and unavoidable. If a public agency approves a proposed project that has significant and unavoidable impacts, the agency must state in writing the specific reasons for approving the project based on the Final EIR and any other information in the public record for the project. This

documentation is termed a "statement of overriding considerations" and is used to explain the specific reasons why the benefits of a proposed project make its significant and unavoidable environmental effects acceptable. The statement is prepared based upon substantial evidence in the record and in conjunction with the action to approve the project, in accordance with Section 15093 of the CEQA Guidelines.

This Draft EIR was prepared in accordance with Section 15151 of the CEQA Guidelines, which defines the standards for EIR adequacy as follows:

"An EIR should be prepared with a sufficient degree of analysis to provide decisionmakers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure."

1.2 ENVIRONMENTAL IMPACT REPORT BACKGROUND

As described in Chapter 2 of this Draft EIR, Metro published the Crenshaw Northern Extension Feasibility/Alternatives Analysis Study (Metro 2018), which presented the relative performance and cost of various alignment and station alternatives. To further refine the alternatives, Metro prepared the Crenshaw Northern Extension Advanced Alternatives Analysis Screening Study (Metro 2020), resulting in the identification of three recommended alignment alternatives. In 2020, the Metro Board provided direction to prepare the Draft EIR building on previous work for three recommended alignment alternatives.

A Notice of Preparation (NOP) of the Draft EIR was prepared and distributed for public review in April 2021 to initiate the CEQA EIR process. The NOP, as well as the scoping comment letters and verbal comments, are included in Appendix 1-A, Crenshaw Northern Extension Scoping Summary Report, of this Draft EIR.

1.3 SCOPE AND CONTENT OF THE DRAFT EIR

In accordance with Appendix G of the CEQA Guidelines, this Draft EIR includes detailed analyses of the following environmental topics:

- Aesthetics
- Air Quality
- Biological Resources
- Communities, Population, and Housing
- Cultural and Paleontological Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Growth Inducing Impacts
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise and Vibration

- Public Services and Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Cumulative Impacts
- Other CEQA topics include Effects Determined Not to be Significant (Agriculture and Forestry Resources, and Wildfire); Significant and Unavoidable Impacts; and Significant Irreversible Environmental Changes

This Draft EIR was prepared under the direction and supervision of Metro and reflects the independent judgment of Metro. During preparation of this Draft EIR, several rounds of community and stakeholder engagement were held to inform agencies, organizations, and persons who might have an interest in this proposed project. Information, data, and observations from these outreach efforts are included in Chapter 6 of this Draft EIR. During the 30-day public review period, this Draft EIR is available for general public review on Metro's website (https://www.metro.net/kne/) and at the following locations:

- Metro Headquarters, Dorothy Peyton Gray Transportation Library, One Gateway Plaza, Los Angeles, CA 90012
- Baldwin Hills Branch Library, 2906 S La Brea Avenue, Los Angeles, CA 90016
- Hyde Park Miriam Matthews Branch Library, 2205 W Florence Avenue, Los Angeles, CA 90043
- Angeles Mesa Branch Library, 2700 W 52nd Street, Los Angeles, CA 90043
- View Park Bebe Moore Campbell Library, 2854 W 54th Street, Los Angeles, CA 90043
- Washington Irving Branch Library, 4117 W Washington Boulevard, Los Angeles, CA 90018
- Jefferson - Vassie D. Wright Memorial Branch Library, 2211 W Jefferson Boulevard, Los Angeles, CA 90018
- Fairfax Branch Library, 161 S Gardner Street, Los Angeles, CA 90036
- Will & Ariel Durant Branch Library, 7140 W Sunset Boulevard, Los Angeles, CA 90046
- Frances Howard Goldwyn Hollywood Regional Branch, 1623 Ivar Avenue, Los Angeles, CA 90028
- West Hollywood Library, 625 N San Vicente Boulevard, West Hollywood, CA 90069
- Russian Language Public Library, 7362 Santa Monica Boulevard, West Hollywood, CA 90046
- Margaret Herrick Library, 333 S La Cienega Boulevard, Beverly Hills, CA 90211
- Inglewood Public Library, 101 W Manchester Boulevard, Inglewood, CA 90301

During the 30-day Draft EIR public review and comment period, public agencies, organizations, and individuals may submit comments concerning the adequacy of the document by mail, email, or phone to:

Roger Martin, Project Manager
Los Angeles County Metropolitan Transportation Authority
One Gateway Plaza, Mail Stop 99-22-5
Los Angeles, CA 90012-2952
Phone: 213-418-3093
Email: klinenorth@metro.net

In accordance with Section 15088 of the CEQA Guidelines, after the public review and comment period, written responses to all written comments and oral testimony pertaining to significant environmental issues received during the comment period will be prepared as part of the Final EIR. As required by CEQA, responses to comments submitted by commenting agencies will be distributed to those agencies for review prior to consideration of the Final EIR by the Metro Board. Pursuant to Sections 15090 to 15093 of the CEQA Guidelines, upon completion of the Final EIR and other required documentation, the Metro Board may certify the Final EIR, adopt findings relative to the project's environmental effects after implementation of mitigation measures, provide a statement of overriding considerations, and approve the project. Following project approval, a Notice of Determination is filed with the State Clearinghouse.

1.4 ENVIRONMENTAL IMPACT REPORT ORGANIZATION

This Draft EIR is comprised of the following chapters:

ES. Executive Summary. This chapter provides a summary of the project, project background, environmental impacts, mitigation measures, public outreach, and alternatives to the project.

1. Introduction. This chapter briefly discusses the purpose of the Draft EIR, identifies the environmental topics, describes the environmental review process and organization, and discusses the intended use of this Draft EIR.
2. Project Description. This chapter provides a detailed description of the project, including location and surrounding uses, history, objectives, operating characteristics and maintenance activities, construction approach, and project schedule.
3. Environmental Analysis. This chapter presents the environmental setting, methodology, thresholds of significance, impact analyses and significance conclusions, and, if applicable, mitigation measures for the potentially affected environmental resources. This chapter also addresses cumulative impacts for each resource, as well as growth-inducing impacts. Each environmental topic addressed in the chapter is supported by a corresponding technical report, which is included as an appendix to this Draft EIR.
4. Other CEQA Required Topics. This chapter summarizes possible effects of the project that were determined not to be significant, discusses significant and unavoidable impacts that would result from the project, and analyzes significant irreversible changes in the environment.
5. Comparison of Alternatives. This chapter provides an analysis of a reasonable range of alternatives to the project, including the No Project Alternative and the High Frequency Bus Alternative. The impacts of the alternatives are summarized to facilitate the identification of the Environmentally Superior Alternative as required by CEQA.
6. Public Outreach. This chapter presents public engagement and community outreach that occurred throughout the environmental process. This chapter lists the organizations and persons with whom Metro consulted during the Draft EIR process.
7. References. This chapter lists the references and sources used in the preparation of this Draft EIR.

8. Abbreviations and Acronyms. This chapter lists the acronyms and abbreviations used throughout the Draft EIR.
9. List of Contributors and Preparers. This chapter lists persons who contributed to the preparation of this Draft EIR.

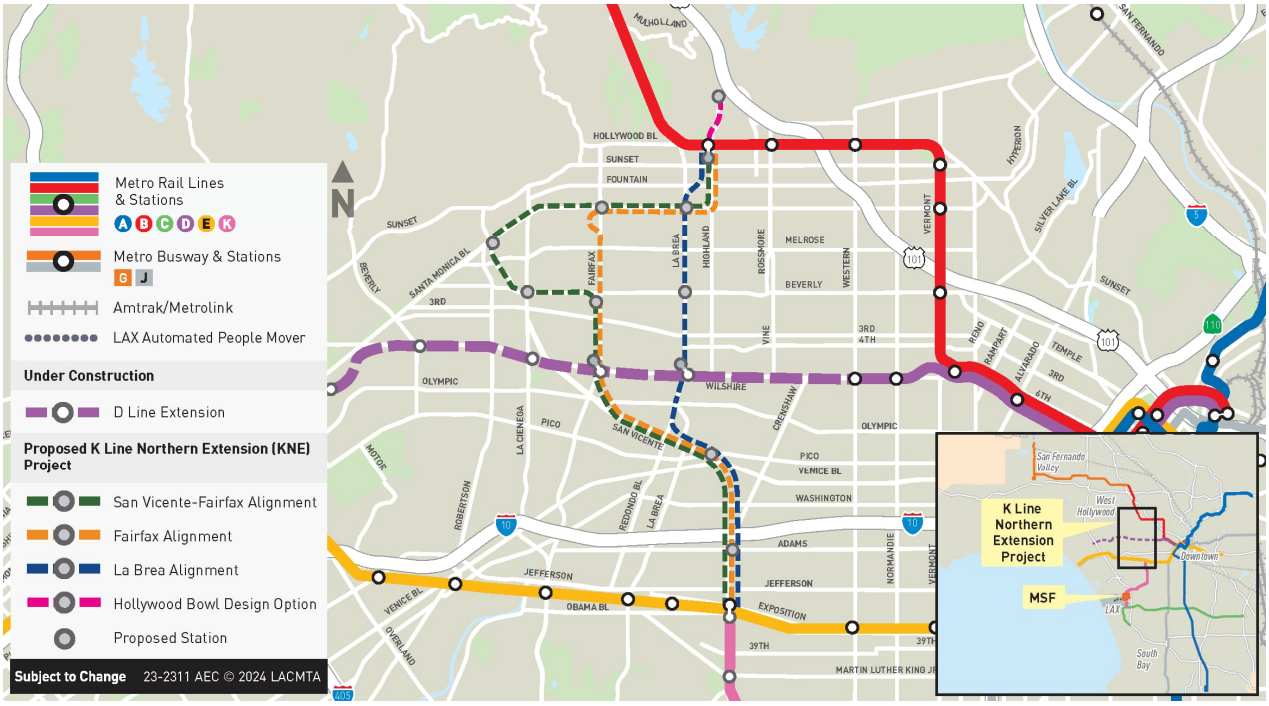
CHAPTER 2 PROJECT DESCRIPTION

The K Line Northern Extension Transit Corridor Project (KNE) (formerly referred to as the Crenshaw Northern Extension) would extend the Los Angeles County Metropolitan Transportation Authority's (Metro) light rail transit (LRT) K Line (formerly Crenshaw/LAX Line) north from its current terminus at the Metro E Line (Expo) Expo/Crenshaw Station to the Metro D Line (Purple) at Wilshire Boulevard and the proposed terminus at the Metro B Line (Red) Hollywood/Highland Station. An alternate terminus station farther north at the Hollywood Bowl is also under consideration. KNE would serve as a critical regional connection, linking the South Bay, Los Angeles International Airport (LAX) area, South Los Angeles, Inglewood, and Crenshaw corridor to Mid-City, Central Los Angeles, West Hollywood, and Hollywood, allowing for further connections to points north in the San Fernando Valley via the Metro B Line. KNE would also connect major activity centers and areas of high population and employment density.

This Draft Environmental Impact Report (EIR) includes evaluation of the following three KNE underground alignments as directed by the Metro Board of Directors (Metro Board) to advance for environmental review (Figure 2-1):

- San Vicente–Fairfax Alignment
- Fairfax Alignment
- La Brea Alignment

FIGURE 2-1. K LINE NORTHERN EXTENSION PROJECT



Source: Connect Los Angeles Partners 2024

This Draft EIR also analyzes the Hollywood Bowl Design Option, which would extend any of the three alignments farther north to an alternate terminus station at the Hollywood Bowl.

KNE would be constructed from south to north in two or three sections depending on the selected alignment. The KNE construction sections are described in Section 2.4.6 of this chapter.

To facilitate operations of the project, KNE includes an expansion of Metro's Rail Division 16 Maintenance Yard (Division 16), which is located near the intersection of Aviation Boulevard and Arbor Vitae Street in the City of Los Angeles, along the southern segment of the existing K Line in the vicinity of Los Angeles International Airport (LAX) (Figure 2-2).

FIGURE 2-2. KNE PROPOSED MAINTENANCE AND STORAGE FACILITY SITE MAP

Source: Connect Los Angeles Partners 2024

For the purposes of this Draft EIR, the proposed project is the KNE Fairfax Alignment (Figure 2-3). This alignment is the proposed project in the Draft EIR because it is the alignment that has been historically studied and advanced over time, dating back to the 1983 Los Angeles Rail Rapid Transit Project. This term does not, however, convey any preference or recommendation as to the alignment or design option, and all alignment variants are evaluated equally. Following the completion of the public comment period on

the Draft EIR, Metro staff will prepare a recommendation for the Metro Board to consider in the selection of a Locally Preferred Alternative (LPA) based on findings from the Draft EIR, public comments made during the comment period, technical analysis, stakeholder input, and other factors such as project objectives, cost, and ridership. The Metro Board will vote at a public meeting to select an LPA.

FIGURE 2-3. PROPOSED PROJECT: KNE FAIRFAX ALIGNMENT

Source: Connect Los Angeles Partners 2024

2.1 PROJECT BACKGROUND AND HISTORY

Over the past decade, Metro has documented the clear need for a north-south rail line in the Central Los Angeles vicinity to address high travel demand and alleviate congestion throughout the area, which includes some of the busiest destinations and employment centers in Southern California. In 2009, Metro prepared the *Wilshire/La Brea LRT Extension Feasibility Study* (Metro 2009a), which considered light rail extensions of the Crenshaw/LAX Line farther north from the Metro E Line along La Brea Avenue, Fairfax Avenue, La Cienega Boulevard, and San Vicente Boulevard. A portion of the San Vicente and La Cienega alignments, between Hollywood and Wilshire Boulevard, was studied further in the *Westside Subway Extension Alternatives Analysis* (Metro 2009b) as a potential heavy rail branch of the Purple Line Extension, now the Metro D Line Extension, but was ultimately dropped from further consideration due to funding constraints at the time.

In 2016, Metro initiated a feasibility study to further consider the possibility of extending the K Line to the north. In 2018, Metro published the *Crenshaw Northern Extension Feasibility/Alternatives Analysis Study* (Feasibility/AA Study) (Metro 2018), which presented the relative performance and cost of five alignment alternatives—Vermont, La Brea, Fairfax, La Cienega, and San Vicente. To further refine the alignments,

Metro prepared the *Crenshaw Northern Extension Advanced Alternatives Analysis Screening Study* (Metro 2020) (Advanced AA), resulting in the identification of three recommended alignments: the San Vicente–Fairfax Alignment, the Fairfax Alignment, and the La Brea Alignment. In 2020, the Metro Board provided direction to prepare the Draft EIR for the KNE for these three recommended alignments.

Public scoping for KNE occurred between April 15, 2021 and May 28, 2021. Following the scoping period, KNE was refined to reflect comments received and to optimize the project's design, as documented in Metro's *Post-Scoping Alignment Refinement Evaluation Report* (Metro 2021).

A more detailed summary of the rail alternatives and extensions previously evaluated in other Metro documents is available in Appendix 2-A, Alternatives Considered but Withdrawn from Further Evaluation.

2.2 PROJECT OBJECTIVES

The objectives of the project are as follows:

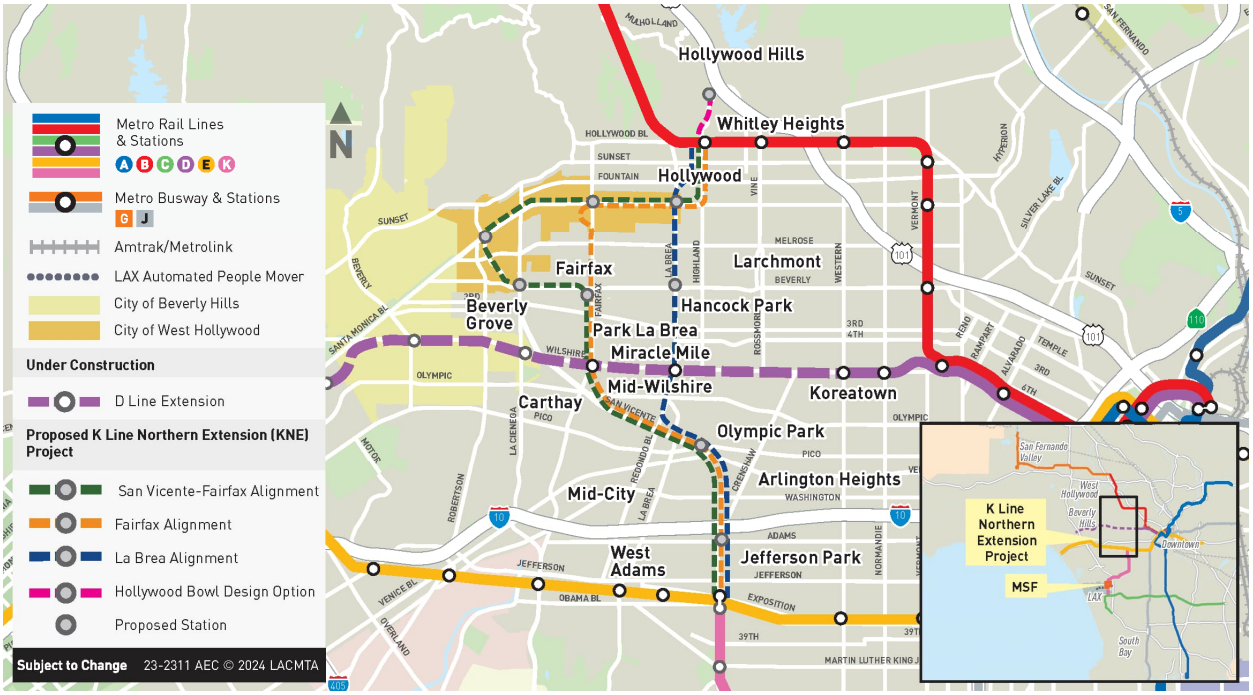
- Leverage the high-volume east-west rail network to provide new north-south connections and close a regional network gap between the Metro K, E, D, and B Lines.
- Increase the efficiency and convenience of transit trips by providing faster and more direct service, in turn creating more connections and mobility options.
- Reduce vehicle miles traveled and greenhouse gas emissions by providing an alternative to congested roadways by offering high-capacity, grade-separated transit to meet existing, growing demand.
- Maximize access to jobs, housing, and opportunity through the implementation of frequent and reliable rail service.
- Improve mobility for transit-dependent residents by providing alternatives to congestion with efficient transit service and a cohesive high-capacity and high-speed transit network.

2.3 PROJECT SETTING AND LOCATION

KNE is located within the Central Los Angeles region of Los Angeles County, shown in Figure 2-4. KNE, including the three alignments and Hollywood Bowl Design Option, would be located in the Cities of Los Angeles and West Hollywood. KNE would be located within the following neighborhoods in the City of Los Angeles:

- West Adams
- Jefferson Park
- Arlington Heights
- Mid-City
- Miracle Mile/Mid-Wilshire
- Hancock Park
- Olympic Park
- Park La Brea
- Carthay
- Beverly Grove
- Mid-City West/Fairfax District
- Hollywood
- Hollywood Hills/Whitley Heights

FIGURE 2-4. NEIGHBORHOODS IN THE VICINITY OF THE K LINE NORTHERN EXTENSION



Source: Connect Los Angeles Partners 2024

The project vicinity encompasses a variety of land uses, including single-family and multifamily residential neighborhoods and dense commercial and retail corridors. The character of communities changes dramatically from the Metro E Line in the south to Hollywood in the north. The southern portion (south of Wilshire Boulevard) consists of low-rise but fairly dense housing with small-scale commercial uses, while the northern portion (north of Wilshire Boulevard) is characterized by regional activity centers, dense retail development, hotels, and significant employment centers and tourist attractions, as well as high-density, multifamily residential development. Some of the major regional activity and employment centers within the area include the Midtown Crossing Shopping Center, Los Angeles County Museum of Art (LACMA), the Original Farmers Market, the Grove, Cedars-Sinai Medical Center, the Beverly Center, West Hollywood's Rainbow District, the Pacific Design Center, the Sunset Strip, the Hollywood Walk of Fame, and the Hollywood Bowl. The area surrounding the proposed expanded maintenance and storage facility (MSF) is primarily industrial with some commercial uses.

2.4 KNE PROJECT DESCRIPTION

KNE would provide a northern extension of the Metro K Line from its current terminus at the Metro E Line Expo/Crenshaw Station to the northern terminus at either the Metro B Line Hollywood/Highland Station or the optional Hollywood Bowl Station. From the existing Expo/Crenshaw Station, KNE would travel north underground, with parallel twin-bore tunnels, connecting to the Metro D Line at Wilshire Boulevard and the Metro B Line at the Hollywood/Highland Station. KNE would operate entirely underground with the exception of the station entrances, which provide street-level access for riders. At the respective transfer stations, transfers between the K Line and the D and B Lines would be entirely underground and riders would be able to access both lines from any of the station entrances.

KNE includes three potential light rail alignments with stations, the expanded MSF at Division 16, and the Hollywood Bowl Design Option. The following alignments are described in detail in Section 2.4.1, and proposed stations are described in Section 2.4.1.4:

- KNE San Vicente–Fairfax Alignment
- KNE Fairfax Alignment
- KNE La Brea Alignment

KNE would be constructed from south to north in two or three sections depending on the selected alignment. For all three alignments, a design option to terminate at the Hollywood Bowl is under consideration. An expanded MSF at the existing Division 16 site near LAX would also be constructed to support operation. Refer to Table 2-1 for a summary of the characteristics of each KNE alignment and Hollywood Bowl Design Option.

TABLE 2-1. CHARACTERISTICS OF KNE

	SAN VICENTE–FAIRFAX ALIGNMENT	FAIRFAX ALIGNMENT	LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION
Alignment length	9.7 miles underground	7.9 miles underground	6.2 miles underground	+ 0.8 mile underground
Stations	9 underground	7 underground	6 underground	+1 underground
Travel time between Expo/ Crenshaw and Hollywood/ Highland Stations	19 minutes	15 minutes	12 minutes	+2 minutes (from Hollywood/Highland)

Source: Connect Los Angeles Partners 2024

2.4.1 ALIGNMENTS

2.4.1.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

The KNE San Vicente–Fairfax Alignment would extend the K Line underground approximately 9.7 miles north from the Metro E Line Expo/Crenshaw Station to the Metro B Line Hollywood/Highland Station. This alignment would tunnel beneath Crenshaw Boulevard, San Vicente Boulevard, Fairfax Avenue, Beverly

Boulevard, Santa Monica Boulevard, and Highland Avenue, with nine new stations, as shown in Figure 2-5. The KNE San Vicente–Fairfax Alignment would serve destinations throughout the west and central portions of the area, including LACMA, the Original Farmers Market/the Grove, Cedars-Sinai Medical Center, the commercial districts along Santa Monica Boulevard in West Hollywood, and Hollywood. This alignment would be the longest of the three alignments and would have the highest number of new stations.

The KNE San Vicente–Fairfax Alignment includes nine stations, which are described in detail in Section 2.4.1.4:

- Crenshaw/Adams
- Midtown Crossing
- Wilshire/Fairfax
- Fairfax/3rd
- La Cienega/Beverly
- San Vicente/Santa Monica
- Fairfax/Santa Monica
- La Brea/Santa Monica
- Hollywood/Highland

FIGURE 2-5. KNE SAN VICENTE–FAIRFAX ALIGNMENT

Source: Connect Los Angeles Partners 2024

The KNE San Vicente–Fairfax Alignment would travel north beneath Crenshaw Boulevard from the existing Metro K Line Expo/Crenshaw Station to the proposed Crenshaw/Adams Station at Adams Boulevard. From the Crenshaw/Adams Station, the alignment would continue straight north, tunneling below private properties in the Mid-City and Lafayette Square neighborhoods to connect to the Midtown Crossing Station.

From the Midtown Crossing Station, the alignment would continue northwest below San Vicente Boulevard then curve northwest at Hauser Boulevard, crossing underneath private properties and Olympic Boulevard until it reaches Wilshire Boulevard and Fairfax Avenue. At this intersection, the alignment would cross Wilshire Boulevard and travel beneath the Metro D Line to the proposed Wilshire/Fairfax Station, which would connect to the future Metro D Line Station. From the Wilshire/Fairfax Station, the alignment would continue north underneath Fairfax Avenue to the Fairfax/3rd Station.

South of the intersection of Beverly Boulevard and Fairfax Avenue, the alignment would curve northwest before continuing west beneath Beverly Boulevard to connect to the La Cienega/Beverly Station. Following Beverly Boulevard west, the alignment would curve northwest and travel below Sherbourne Drive before continuing northwest beneath San Vicente Boulevard. North of the Pacific Design Center and the West Hollywood Library, the alignment would curve beneath West Hollywood Park to turn northeast underneath Santa Monica Boulevard to the San Vicente/Santa Monica Station. The alignment would follow Santa Monica Boulevard east to the Fairfax/Santa Monica Station.

Traveling east below Santa Monica Boulevard, the alignment would then connect to the La Brea/Santa Monica Station at La Brea Avenue. East of Orange Drive, the alignment would curve northeast beneath private properties to turn north underneath Highland Avenue before terminating at the Hollywood/Highland Station with a connection to the Metro B Line. At the D and B Line transfer locations, the alignment would include new station entrances. The design option that would continue north to the Hollywood Bowl is described in Section 2.4.2.

2.4.1.2 KNE FAIRFAX ALIGNMENT

The KNE Fairfax Alignment would extend the K Line underground approximately 7.8 miles north from the Metro E Line Expo/Crenshaw Station to the Metro B Line Hollywood/Highland Station. Similar to the KNE San Vicente–Fairfax Alignment, the KNE Fairfax Alignment would tunnel beneath Crenshaw Boulevard, San Vicente Boulevard, Fairfax Avenue, Highland Avenue, and Santa Monica Boulevard, as shown in Figure 2-6. However, instead of turning west at Beverly Boulevard, the Fairfax Alignment would continue north beneath Fairfax Avenue and then turn east at Santa Monica Boulevard. The KNE Fairfax Alignment would serve some of the same destinations as the KNE San Vicente–Fairfax Alignment in the central portion of the area, including LACMA and the Original Farmers Market/the Grove.

The KNE Fairfax Alignment includes seven stations, which are described in detail in Section 2.4.1.4:

- Crenshaw/Adams
- Midtown Crossing
- Wilshire/Fairfax

- Fairfax/3rd
- Fairfax/Santa Monica
- La Brea/Santa Monica
- Hollywood/Highland

FIGURE 2-6. KNE FAIRFAX ALIGNMENT

Source: Connect Los Angeles Partners 2024

The KNE Fairfax Alignment would follow the same alignment as the KNE San Vicente–Fairfax Alignment between the existing Metro K Line Expo/Crenshaw Station to the proposed Fairfax/3rd Station. The alignment would travel north beneath Crenshaw Boulevard from the existing Metro K Line Expo/Crenshaw Station to the proposed Crenshaw/Adams Station south of Adams Boulevard. From the Crenshaw/Adams Station, the alignment would continue north, tunneling below private properties in the Mid-City and Lafayette Square neighborhoods to connect to the Midtown Crossing Station.

From the Midtown Crossing Station, the alignment would continue northwest below San Vicente Boulevard then curve northwest at Hauser Boulevard, crossing underneath private properties and Olympic Boulevard until it reaches Wilshire Boulevard and Fairfax Avenue. At this intersection, the alignment would cross Wilshire Boulevard and travel beneath the Metro D Line to the proposed Wilshire/Fairfax Station, which would connect to the future Metro D Line Station. From the proposed Wilshire/Fairfax Station, the alignment would continue north underneath Fairfax Avenue to the Fairfax/3rd Station.

From the Fairfax/3rd Station, the KNE Fairfax Alignment would continue north beneath Fairfax Avenue. South of Waring Avenue, the alignment would curve northwest, tunneling below private properties between Crescent Heights Boulevard to the west and Fairfax Avenue to the east. At Romaine Street, the alignment would begin to curve northeast to turn east along Santa Monica Boulevard, connecting to the Fairfax/Santa Monica Station.

The KNE Fairfax Alignment would follow the same alignment as the KNE San Vicente–Fairfax Alignment between the Fairfax/Santa Monica Station and the Hollywood/Highland Station. Traveling east below Santa Monica Boulevard, the alignment would then connect to the La Brea/Santa Monica Station at La Brea Avenue. East of Orange Drive, the alignment would curve northeast beneath private properties to turn north underneath Highland Avenue before terminating at the Hollywood/Highland Station with a connection to the Metro B Line. At the D and B Line transfer locations, the alignment would include new station entrances. The design option that would continue north to the Hollywood Bowl is described in Section 2.4.2.

2.4.1.3 KNE LA BREA ALIGNMENT

The KNE La Brea Alignment would extend the K Line underground approximately 6.2 miles north from the Metro E Line Expo/Crenshaw Station to the Metro B Line Hollywood/Highland Station. The alignment would tunnel beneath Crenshaw Boulevard, San Vicente Boulevard, La Brea Avenue, and Highland Avenue with six new stations, as shown in Figure 2-7. The KNE La Brea Alignment is the shortest of the three alignments and would serve the Mid-City neighborhoods, the La Brea corridor, Hancock Park, and Hollywood.

The KNE La Brea Alignment includes six stations, which are described in detail in Section 2.4.1.4:

- Crenshaw/Adams
- Midtown Crossing
- Wilshire/La Brea
- La Brea/Beverly
- La Brea/Santa Monica
- Hollywood/Highland

The KNE La Brea Alignment would follow the same alignment as the KNE San Vicente–Fairfax and Fairfax Alignments between the existing Metro K Line Expo/Crenshaw Station to just northwest of the proposed Midtown Crossing Station at La Brea Avenue. The alignment would travel north beneath Crenshaw Boulevard from the existing Metro K Line Expo/Crenshaw Station to the proposed Crenshaw/Adams Station south of Adams Boulevard. From the Crenshaw/Adams Station, the alignment would continue north, tunneling below private properties in the Mid-City and Lafayette Square neighborhoods to connect to the Midtown Crossing Station.

FIGURE 2-7. KNE LA BREA ALIGNMENT

Source: Connect Los Angeles Partners 2024

From the Midtown Crossing Station, the alignment would follow the same alignment as the San Vicente–Fairfax and Fairfax Alignments to La Brea Avenue, continuing northwest beneath San Vicente Boulevard to La Brea Avenue. It would curve northwest below private properties between La Brea Avenue and Redondo Boulevard. At Olympic Boulevard, the alignment would then continue north beneath La Brea Avenue, crossing Wilshire Boulevard and traveling beneath the Metro D Line to the Wilshire/La Brea Station with a connection to the future Metro D Line Station. From the Wilshire/La Brea Station, the alignment would continue north to the La Brea/Beverly Station.

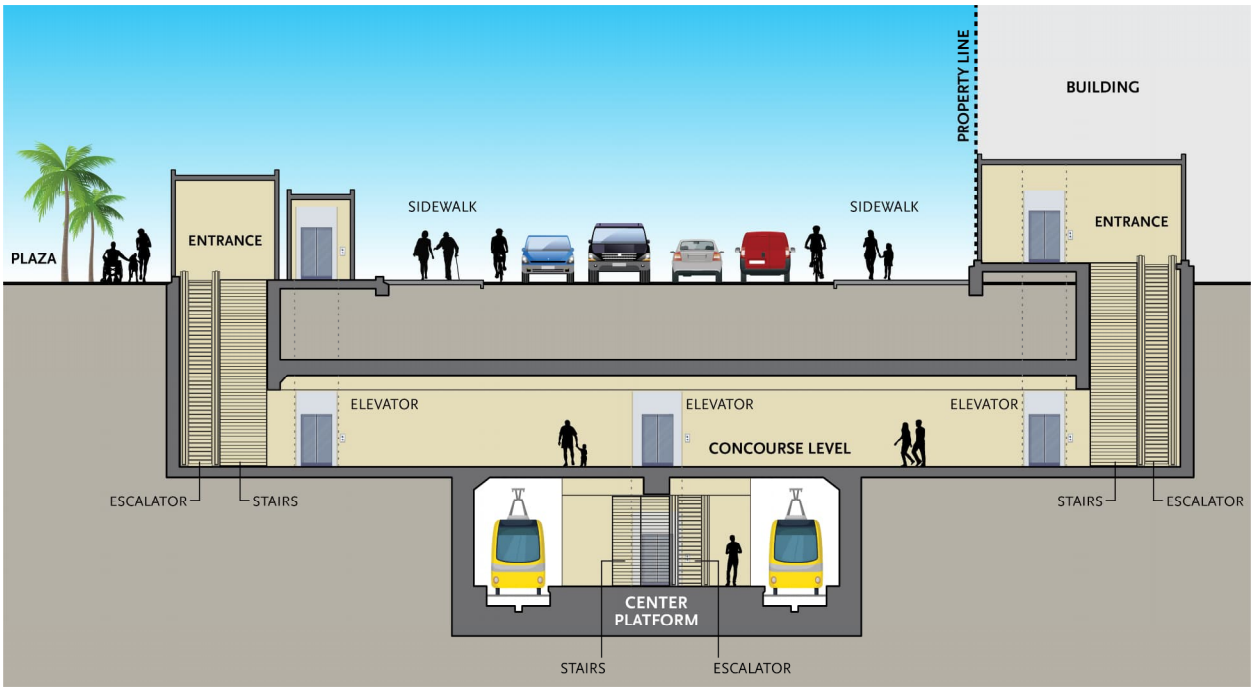
From the La Brea/Beverly Station, the alignment would continue north following La Brea Avenue to the La Brea/Santa Monica Station at Santa Monica Boulevard. From the La Brea/Santa Monica Station, the alignment would travel north until Lexington Avenue then curve northeast below private properties between La Brea Avenue and Highland Avenue. South of Sunset Boulevard, the alignment would continue north beneath Highland Avenue before terminating at the Hollywood/Highland Station with a connection to the Metro B Line. At the D and B Line transfer locations, the alignment would include new station entrances. The design option that would continue north to the Hollywood Bowl is described in Section 2.4.2.

2.4.1.4 STATIONS

This section describes each of the proposed stations for the alignments. Figure 2-8 illustrates a typical cross-section of an underground light rail station. All proposed stations would be fully underground and be comprised of two major components:

- Station box: Located underneath public streets, private property, or could be integrated into future developments. Consists of concourse area with ticketing, customer information, and fare gates, and a platform level for passenger waiting, boarding, and alighting trains. Platforms are typically 60 feet below ground but depth ranges depending on surrounding conditions. All boarding platforms would be approximately 270 feet long, approximately 39 inches high above the track, and could accommodate trains of up to three cars.
- Station entrance: Located off street on private property in a plaza with a shaded canopy with the potential to be integrated into a building structure in the future. Entrances would include stairs, escalators, and elevators for circulation, as well as passenger information, wayfinding, and other transit amenities. All stations would be constructed with a single entrance, with the option to construct additional entrances depending on demand and other considerations.

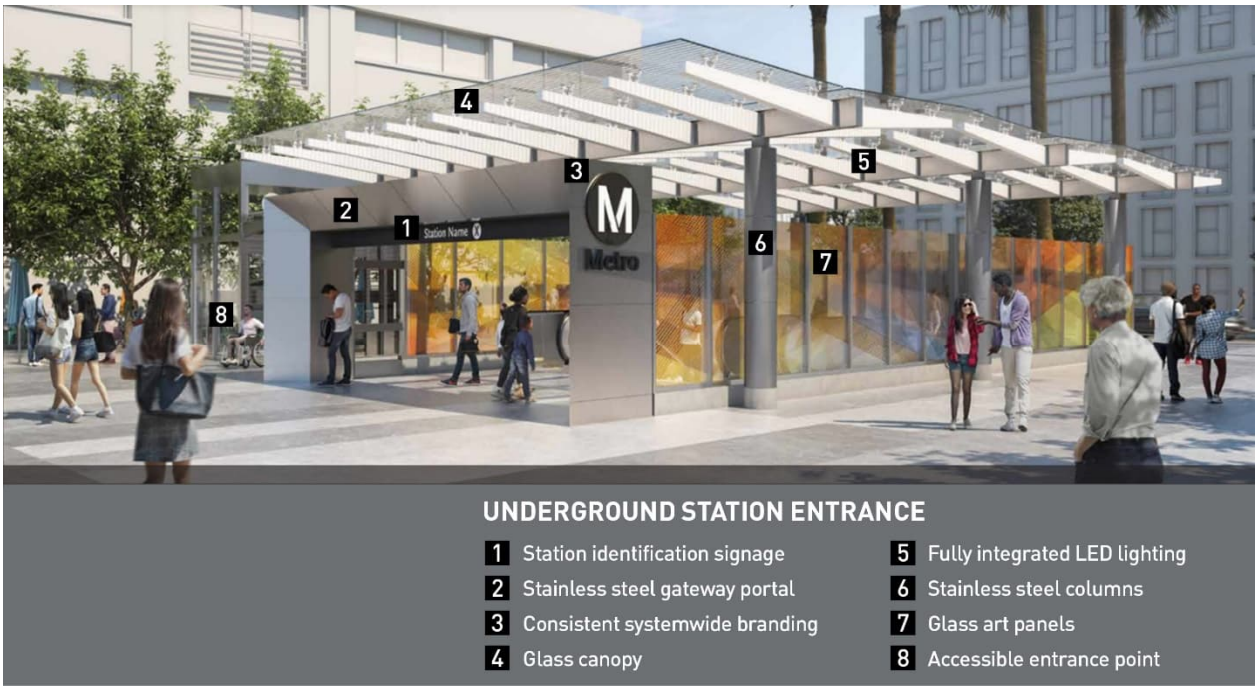
FIGURE 2-8. TYPICAL STATION CROSS-SECTION



Source: Connect Los Angeles Partners 2024

The only visible features of underground stations at street level would be entrances, signage, and possibly ventilation structures and other ancillary facilities at ground level. Figure 2-9 shows a typical Metro station entrance. All proposed stations would be designed to be consistent with Metro's Systemwide Station Design Standards, or equivalent design standards, and Metro's Public Art Policy. Knock-out panels—filler panels that can be removed for future installations/connections/entrances without significantly impacting the integrity of the structure—would be incorporated into station design where needed. Most stations would include an underground track crossover box before or after the station to allow trains to switch tracks for operational flexibility. The locations of the crossover boxes are depicted on each individual station site diagram, which are shown in Appendix 2-B, Advanced Conceptual Engineering Drawings.

FIGURE 2-9. TYPICAL STATION ENTRANCE



Source: Metro 2022

All stations would include two sets of emergency egress facilities, or emergency exits, that can access the surface via hatches inside or outside the public right-of-way (ROW). Each emergency exit route would include a set of stairs that leads to the surface in case of emergencies where elevators and escalators are not working or unsafe to use. Depending on the configuration of the station, some stations may have more than two sets of emergency exits. Each emergency egress shaft would be approximately 15 feet by 25 feet, and the hatch would either be flush with the ground or can be integrated into a building.

In addition to the emergency exits, station ventilation structures would be located in the public ROW and are often separated from the emergency exits. The ventilation structures would either be at ground or sidewalk level and could be incorporated into future development. These ventilation structures and emergency exits may be located on parcels identified and acquired for construction staging. Refer to Section 2.4.4 for a more detailed description of some of the other ancillary facilities.

Surface construction activities would be concentrated at the proposed station locations. Most stations, with the exception of the Hollywood Bowl Station, would be constructed via cut-and-cover construction, where the station box would be excavated from the surface. In order to construct a station, a minimum of one to two acres would be needed for the duration of the station construction period. A larger construction staging site of three to four acres would be required if the site is also used to launch the tunnel boring machines (TBMs) and support tunneling activities. Under each station description below, all construction staging surface areas are approximately measured to the nearest 0.1 acre. Portions of the sidewalk may also be potentially restricted or altered by station construction and are identified in the station drawings as the "sidewalk zone of influence." In this area, the sidewalk and curbs may be temporarily closed to pedestrian access during construction or require reconstruction after project completion. The construction approach is detailed in Section 2.4.5.

Table 2-2 identifies which stations would be constructed under each alignment. In total, 11 station areas are identified for the alignments. The KNE San Vicente–Fairfax Alignment would include nine new stations; the KNE Fairfax Alignment would include seven new stations; and the KNE La Brea Alignment would include six new stations. Table 2-2 also identifies the entrance location options for each station. Only one new entrance would be constructed per station. For stations with multiple entrance options identified, only one option with its corresponding facilities and construction staging, would be built. Therefore, not all sites identified in the Draft EIR would be needed to construct and operate the project. The proposed layout and options under consideration for each station are described in detail below. The Hollywood Bowl Design Option is discussed in Section 2.4.2. Refer to Appendix 2-B, Advanced Conceptual Engineering Drawings, for the detailed station site plan drawings.

TABLE 2-2. STATIONS BY KNE ALIGNMENT

STATION	ALIGNMENT			STATION ENTRANCE OPTIONS (ONLY ONE ENTRANCE TO BE CONSTRUCTED PER STATION)
	SAN VICENTE–FAIRFAX	FAIRFAX	LA BREA	
Crenshaw/Adams (City of Los Angeles)	●	●	●	• Entrance Option 1 – SW • Entrance Option 2 – SE
Midtown Crossing (San Vicente/Pico/Venice) (City of Los Angeles)	●	●	●	• Entrance
Wilshire/Fairfax (City of Los Angeles)	●	●		• Entrance – NW In addition to existing D Line entrance that would provide access to K and D Lines
Fairfax/3rd (City of Los Angeles)	●	●		One entrance to be constructed with optional second entrance: • Entrance 1 – South • Optional Entrance 2
La Cienega/Beverly (City of Los Angeles)	●			• Entrance – NE
San Vicente/Santa Monica (City of West Hollywood)	●			• Entrance Option 1 – South • Entrance Option 2 – North
Fairfax/Santa Monica (City of West Hollywood)	●	●		• Entrance Option 1 – NE • Entrance Option 2 – SE
La Brea/Santa Monica (City of West Hollywood)	●	●	●	• Entrance – NE
Hollywood/Highland (City of Los Angeles)	●	●	●	• Entrance Option 1 – SW • Entrance Option 2 – SE In addition to existing B Line entrance that would provide access to K and B Lines
Wilshire/La Brea (City of Los Angeles)			●	• Entrance – 6th Street In addition to existing D Line entrance that would provide access to K and D Lines
La Brea/Beverly (City of Los Angeles)			●	• Entrance Option 1 – NW • Entrance Option 2 – NE

Source: Connect Los Angeles Partners 2024

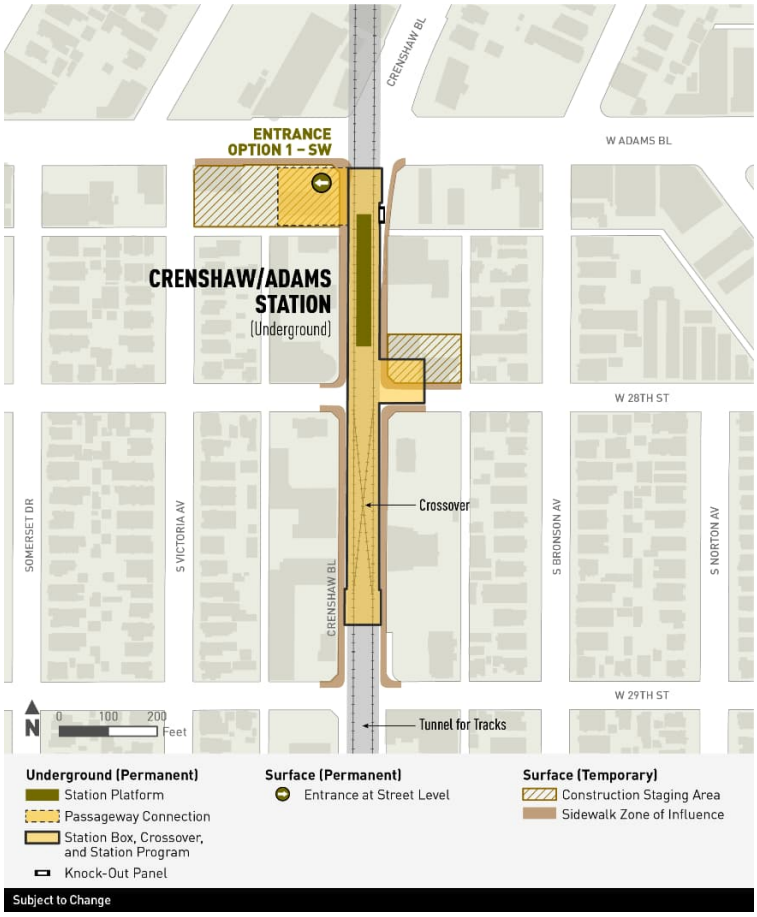
CRENSHAW/ADAMS STATION

The proposed Crenshaw/Adams Station would be the first station north of the Expo/Crenshaw Station and would be located in the City of Los Angeles. This station would be constructed for any of the three KNE alignments. The underground station box would be located directly south of the intersection of Crenshaw Boulevard and Adams Boulevard. There are two entrance options, although only one entrance would be constructed.

ENTRANCE OPTION 1 – SW

Under Entrance Option 1 – SW (Figure 2-10), the entrance would be located on the southwest corner of the Crenshaw Boulevard and Adams Boulevard intersection facing Crenshaw Boulevard. A knock-out panel would be located on the southeast corner of Crenshaw Boulevard and Adams Boulevard, opposite of the entrance option. There would be a double crossover—a track installation to allow traveling trains to move to the other track and continue traveling in the same direction without stopping—at the south end of the station box, south of 28th Street.

FIGURE 2-10. CRENSHAW/ADAMS STATION (ENTRANCE OPTION 1 – SW)



Source: Connect Los Angeles Partners 2024

Two construction staging areas have been identified at this station: 1) on the southwest corner of Adams Boulevard and Crenshaw Boulevard extending to Victoria Avenue (0.9 acre) and 2) on the northeast corner of Crenshaw Boulevard and 28th Street extending to the alley (0.3 acre).

The sidewalk zone of influence would be along Crenshaw Boulevard between Adams Boulevard and 29th Street. At Adams Boulevard, 28th Street, and 29th Street, the sidewalk zone of influence would extend onto the corners of those intersections. At Adams Boulevard, the sidewalk zone of influence would also extend west approximately 325 feet to the intersection of Victoria Avenue and Adams Boulevard to cover the street-facing edge of the construction staging area.

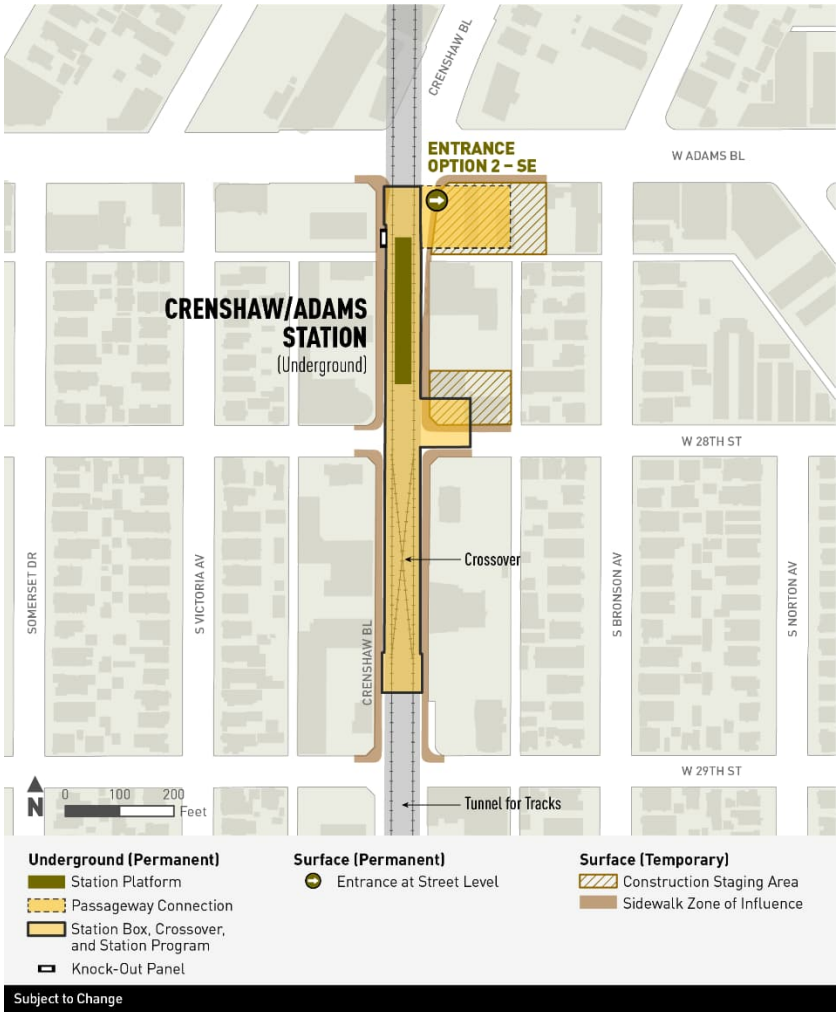
ENTRANCE OPTION 2 – SE

Under Entrance Option 2 – SE (Figure 2-11), the entrance would be located on the southeast corner of Crenshaw Boulevard and Adams Boulevard. A knock-out panel would be located on the southwest corner of Crenshaw Boulevard and Adams Boulevard, opposite of the entrance option. There would be a double crossover at the south end of the station box, south of 28th Street.

Two construction staging areas have been identified at this station: 1) on the southeast corner of Adams Boulevard and Crenshaw Boulevard (0.6 acre) and 2) on the northeast corner of Crenshaw Boulevard and 28th Street (0.3 acre).

The sidewalk zone of influence would be along Crenshaw Boulevard between Adams Boulevard and 29th Street. At Adams Boulevard, 28th Street, and 29th Street, the sidewalk zone of influence would extend onto the corners of those intersections. At Adams Boulevard, the sidewalk zone of influence would also extend east approximately 180 feet past the intersection of Adams Boulevard and Crenshaw Boulevard to cover the street-facing edge of the construction staging area.

FIGURE 2-11. CRENSHAW/ADAMS STATION (ENTRANCE OPTION 2 – SE)

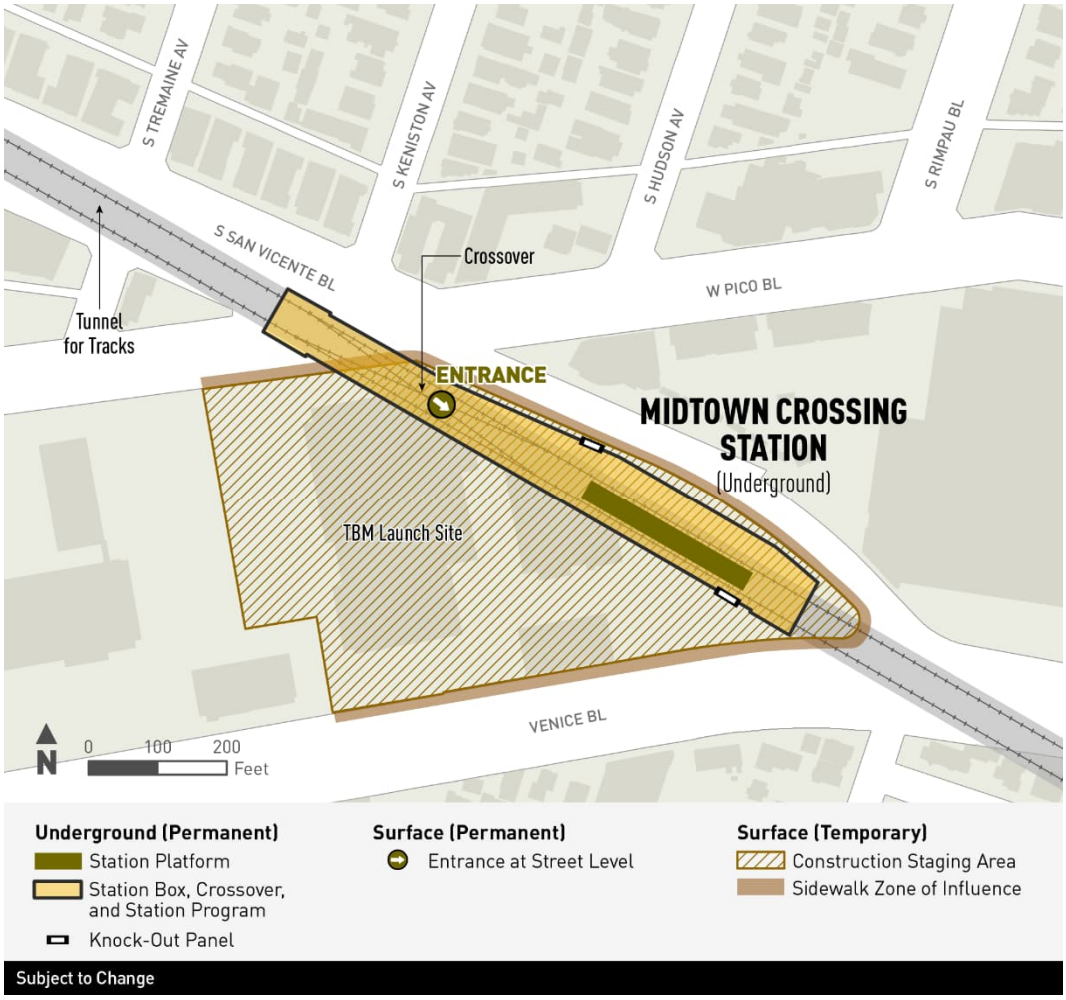


Source: Connect Los Angeles Partners 2024

MIDTOWN CROSSING STATION

The proposed Midtown Crossing Station, shown in Figure 2-12, would be north of the Crenshaw/Adams Station and would be constructed for any of the three KNE alignments. This station would be located in the City of Los Angeles beneath private property bounded by Venice Boulevard to the south, Pico Boulevard to the north, and San Vicente Boulevard to the northeast. The station platform would be located on the southeast corner of the private property with a double crossover at the northwest section of the station box. A station entrance would provide access at street level along the west side of San Vicente Boulevard above the double crossover structure. Two knock-out panels would be provided, one on the east side of the station box near the crossover structure and the other on the west side at the southern end of the station box, to accommodate future entrances. A double crossover would be located at the north side of the station box, partially beneath Pico Boulevard and parallel to San Vicente Boulevard.

FIGURE 2-12. MIDTOWN CROSSING STATION



Source: Connect Los Angeles Partners 2024

An approximately six-acre construction staging area for this station would utilize the parcels bounded by Venice Boulevard to the south, Pico Boulevard to the north, and San Vicente Boulevard to the northeast. This site would be used as a TBM launch site and would require a larger footprint to accommodate construction activities than would a typical station.

The sidewalk zone of influence would encompass the street-facing edges of the construction staging area along Pico Boulevard, San Vicente Boulevard, and Venice Boulevard.

WILSHIRE/FAIRFAX STATION

The proposed Wilshire/Fairfax Station would provide a connection to the currently under construction (as of 2024) Metro D Line Wilshire/Fairfax Station, which would be located below Wilshire Boulevard at the intersection of Wilshire Boulevard and Fairfax Avenue. The proposed station would also provide access to LACMA and the Academy Museum of Motion Pictures north of Wilshire Boulevard, and the Petersen Automotive Museum south of Wilshire Boulevard. This station would only be constructed for the KNE San Vicente–Fairfax and Fairfax Alignments.

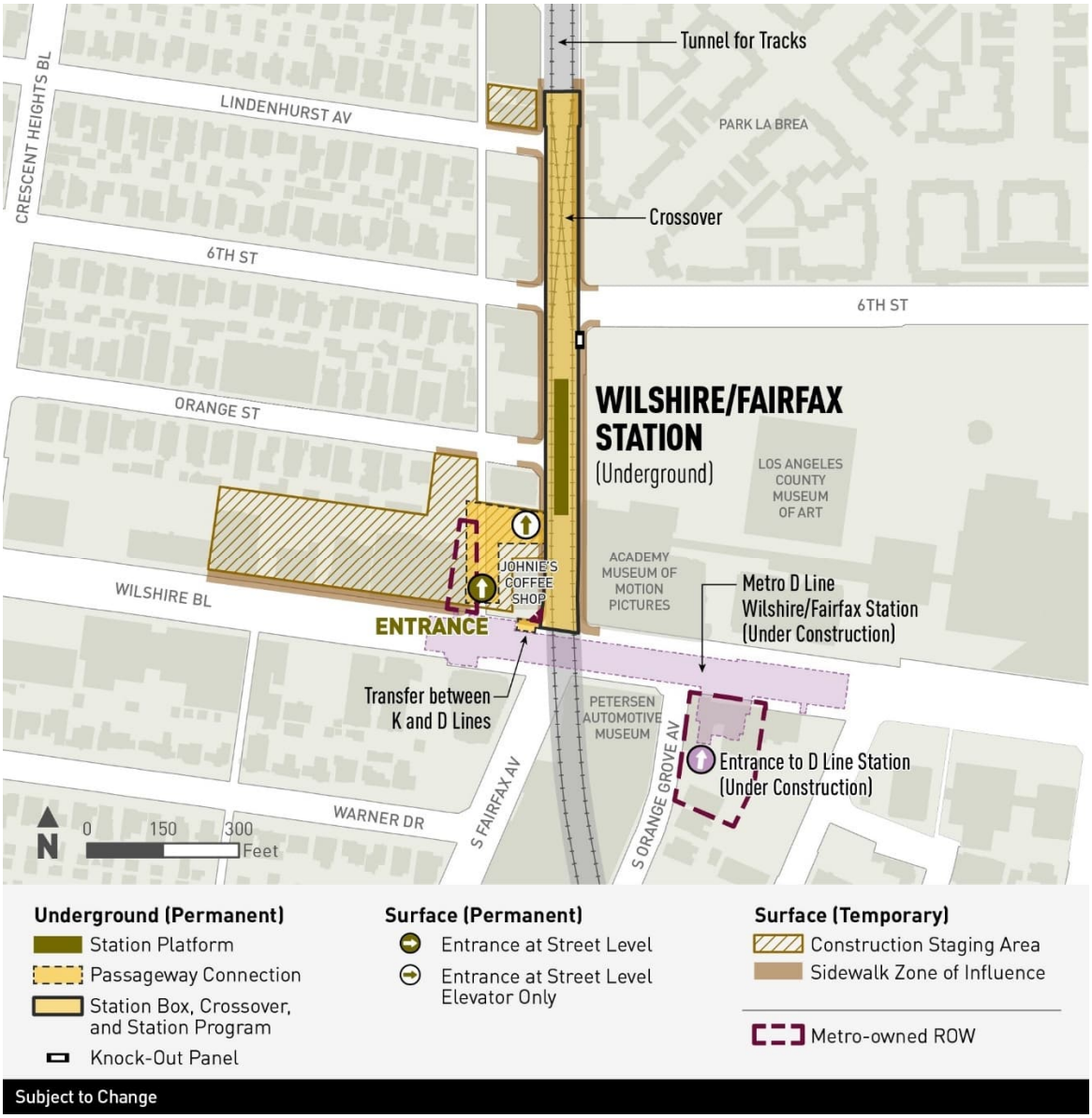
The station box would be located north of Wilshire Boulevard beneath Fairfax Avenue with a crossover north of the station box extending to Lindenhurst Avenue (Figure 2-13). The proposed station entrance would be located on the north side of Wilshire Boulevard, west of Fairfax Avenue and Johnie's Coffee Shop. The entrance would provide direct access to both the K Line and the D Line. Passengers would be able to transfer between the Metro D Line and the K Line through the concourse level of both stations, with a passageway constructed just west of the Wilshire Boulevard and Fairfax Avenue intersection. In order to facilitate the connection to the D Line, a concourse and escalators/elevators would be added to the west side of the existing D Line station box. A knock-out panel would be provided on the east side of the station box, at the southeast corner of Fairfax Avenue and 6th Street, to allow for a potential future entrance. Additional improvements to the existing D Line Station may be required to facilitate passenger transfers between the two transit lines.

The station entrance with escalators and stairs would be located in the alleyway between Johnie's Coffee Shop and the retail store on the north side of Wilshire Boulevard. The entrance's elevators would be located along Fairfax Avenue in the alley immediately north of Johnie's Coffee Shop.

Two construction staging areas have been identified for this station option: 1) along Wilshire Boulevard between the intersection of Wilshire Boulevard and San Diego Way and the parking lots west and north of Johnie's Coffee Shop (2.8 acres) and 2) at the northwest corner of Fairfax Avenue and Lindenhurst Avenue (0.2 acre). The larger construction staging area is due to the depth and complexity of this station construction.

The sidewalk zone of influence would be located on the east and west sides of Fairfax Avenue, between Wilshire Boulevard and Lindenhurst Avenue. At Wilshire Boulevard, Orange Street, 6th Street, and Lindenhurst Avenue, the sidewalk zone of influence would extend past the corners of the respective intersections. It would also cover the southern edge of the construction staging area at 6th Street and Lindenhurst Avenue. At the intersection of Wilshire Boulevard and Fairfax Avenue, the sidewalk zone of influence is not present at the northwest corner where Johnie's Coffee Shop is located, but would extend 700 feet west of the intersection to cover the street-facing edge of the construction staging area along Wilshire Boulevard.

FIGURE 2-13. WILSHIRE/FAIRFAX STATION

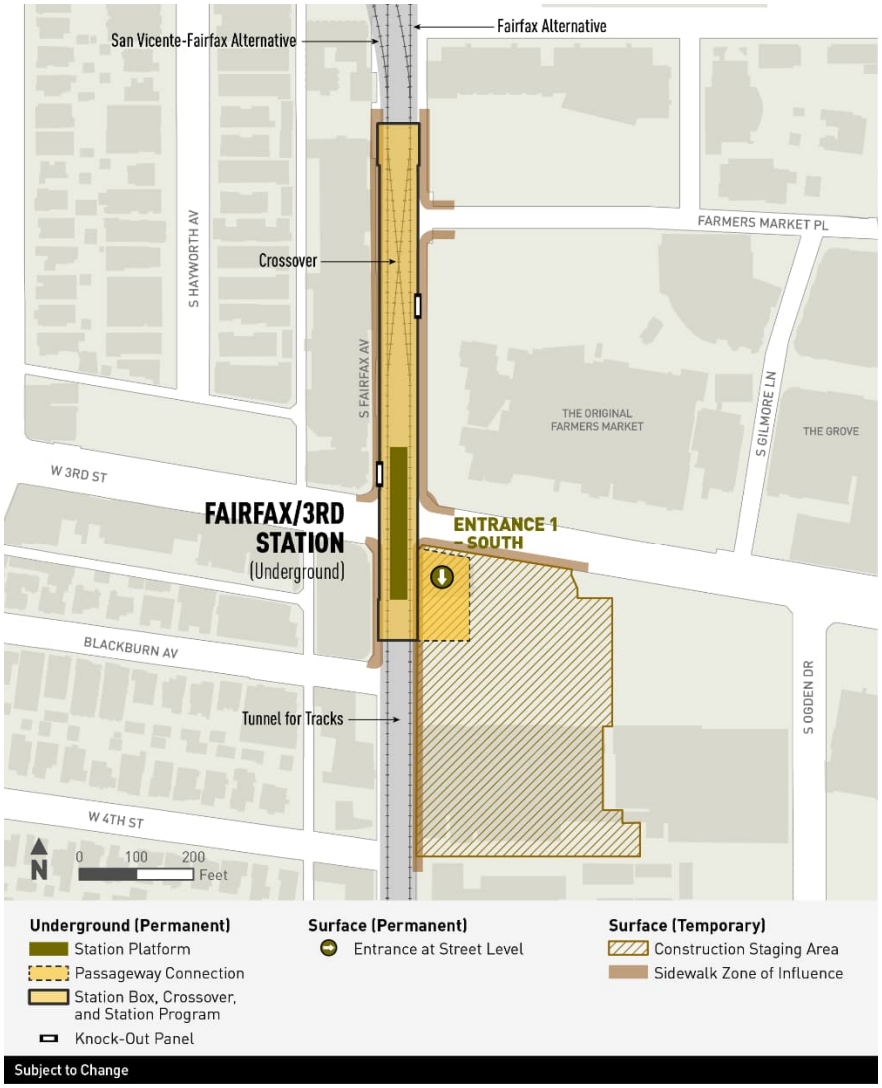


Source: Connect Los Angeles Partners 2024

FAIRFAX/3RD STATION

The proposed Fairfax/3rd Station would provide access to the Grove, the Original Farmers Market, and dense residential land uses to the east, including Park La Brea. The station would also serve retail along Fairfax Avenue and 3rd Street, and the largely residential land uses west of Fairfax Avenue in the Beverly Grove neighborhood. This station would only be constructed for the San Vicente–Fairfax and Fairfax Alignments. The station platform would be located beneath Fairfax Avenue at the intersection of Fairfax Avenue and 3rd Street, as shown in Figure 2-14.

FIGURE 2-14. FAIRFAX/3RD STATION



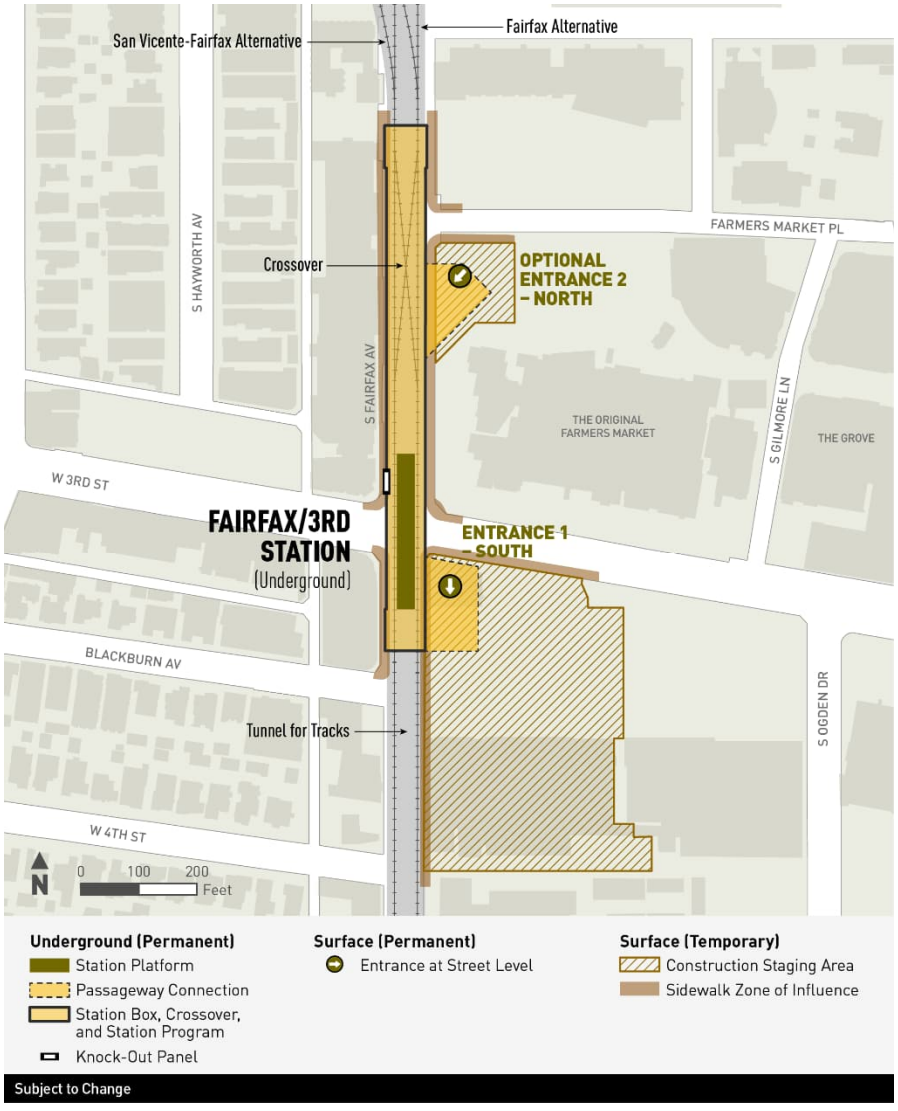
Source: Connect Los Angeles Partners 2024

The station would be constructed with an entrance on the southeast corner of 3rd Street and Fairfax Avenue (Entrance 1 – South) with the option to construct a secondary entrance at the existing Farmers Market parking lot approximately 300 feet north of the Fairfax Avenue and 3rd Street intersection

(Optional Entrance 2 – North). A double crossover would be located on the northern end of the station platform. One knock-out panel would be located on the northwest corner of Fairfax Avenue and 3rd Street to accommodate a potential future entrance. Another knock-out panel would be located 140 feet south of the intersection of Fairfax Avenue and Farmers Market Place to accommodate Optional Entrance 2 if it is not constructed as part of KNE.

Two construction staging areas have been identified at this station: 1) on the southeast corner of the Fairfax Avenue and 3rd Street intersection (3.8 acres) and 2) if Optional Entrance 2 is constructed, at the southeast corner of Fairfax Avenue and Farmers Market Place (0.7 acre). Figure 2-15 shows the Fairfax/3rd Station with Optional Entrance 2 – North and its supporting construction staging area.

FIGURE 2-15. FAIRFAX/3RD STATION (WITH OPTIONAL ENTRANCE 2)



Source: Connect Los Angeles Partners 2024

The sidewalk zone of influence would be located on the east and west sides of the street along Fairfax Avenue between Farmers Market Place and Blackburn Avenue. At Farmers Market Place, 3rd Street, and Blackburn Avenue, the sidewalk zone of influence would extend past the corners of the respective intersections. This would include the northern edge of the construction staging area at Fairfax Avenue and Farmers Market Place. At the large construction staging area at the southeast corner of Fairfax Avenue and 3rd Street, the sidewalk zone of influence would extend approximately 350 feet east along 3rd Street to cover the street-facing edges of the staging area. The zone of influence would also extend approximately 150 feet north of the intersection of Fairfax Avenue and Farmers Market Place.

LA CIENEGA/BEVERLY STATION

As illustrated in Figure 2-16, the proposed La Cienega/Beverly Station would be located beneath Beverly Boulevard, just east of the Beverly Boulevard and La Cienega Boulevard intersection. This station would provide access to the Beverly Center and Beverly Connection shopping malls and Cedars-Sinai Medical Center. This station would only be constructed for the San Vicente–Fairfax Alignment.

The station portal would be located in the City of Los Angeles but would also provide access to the City of West Hollywood to the northwest. The entrance to the station would be located on the northeast corner of the intersection, with access along La Cienega Boulevard and Beverly Boulevard. A double crossover would be located on the eastern end of the station box. A knock-out-panel would be provided on the south side of the station box near La Cienega Boulevard to accommodate a potential future entrance.

Two construction staging areas have been identified at this station: 1) on the north side of Beverly Boulevard between La Cienega Boulevard and Alfred Avenue (0.8 acre) and 2) on the southwest corner of Beverly Boulevard and Croft Avenue (0.4 acre).

The sidewalk zone of influence would be located on the north and south sides of the street along Beverly Boulevard, between La Cienega Boulevard and Orlando Avenue. At La Cienega Boulevard, Alfred Avenue, Croft Avenue, and Orlando Avenue, the sidewalk zone of influence would extend around the corners of the respective intersections. The sidewalk zone of influence would also include all street-facing edges of the construction staging areas at La Cienega Boulevard, Alfred Avenue, and Croft Avenue.

FIGURE 2-16. LA CIENEGA/BEVERLY STATION

Source: Connect Los Angeles Partners 2024

SAN VICENTE/SANTA MONICA STATION

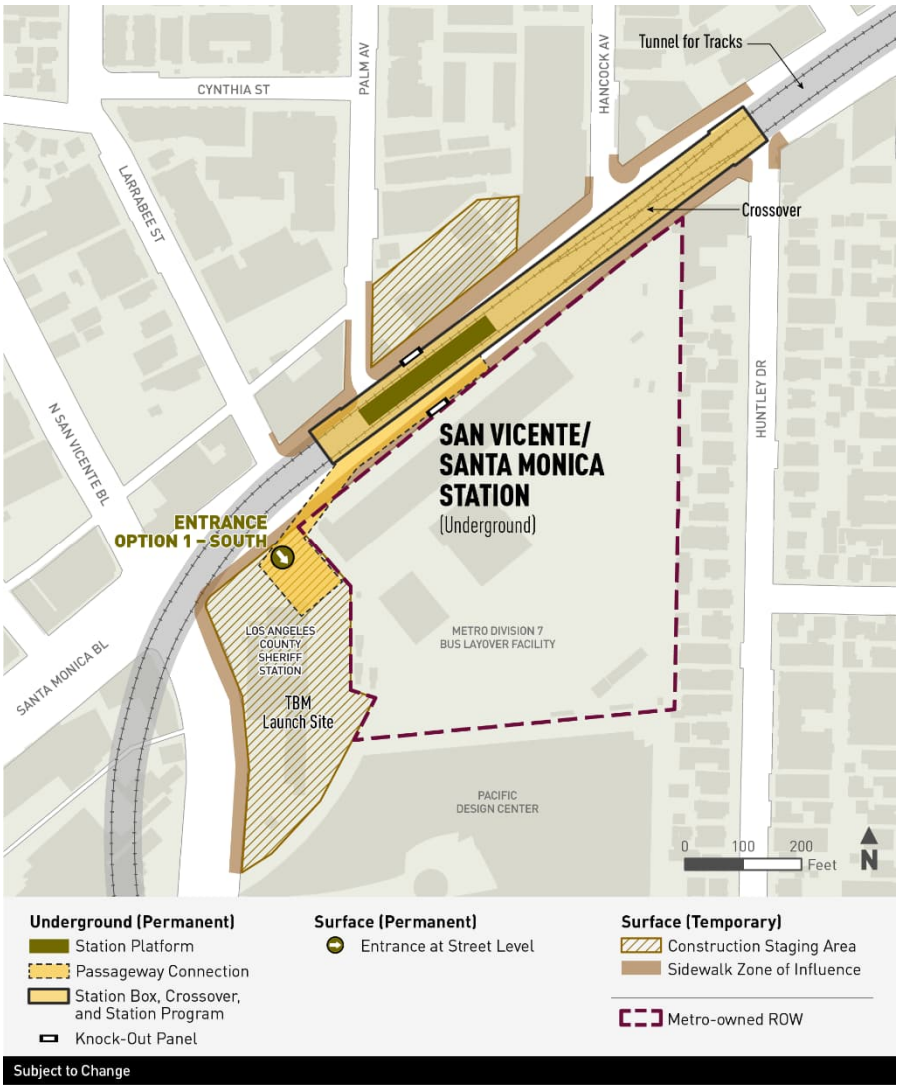
The San Vicente/Santa Monica Station would be located in the City of West Hollywood, less than 0.25 mile north of the Pacific Design Center, the West Hollywood Library, and West Hollywood Park. The station would provide direct access to the active commercial corridor along Santa Monica Boulevard and would also provide access to the Sunset Strip to the north. This station would only be constructed for the San Vicente–Fairfax Alignment. Under the construction approach described in Section 2.4.5, this station would be the northern terminus of Section 2 for the San Vicente–Fairfax Alignment.

The station box would be located beneath Santa Monica Boulevard and east of San Vicente Boulevard, adjacent to the Metro Division 7 bus yard facility, as shown in Figure 2-17. This site would be used as a TBM launch site and would require a larger footprint to accommodate construction activities than would a typical station. Two potential station entrances are under consideration, but only one would be constructed as part of KNE.

ENTRANCE OPTION 1 – SOUTH

Entrance Option 1 would be located on the southeast corner of the Santa Monica Boulevard and San Vicente Boulevard intersection at the existing Los Angeles County Sherriff's Station, as shown in Figure 2-17. One knock-out panel would be provided on the southern side of the station box along Santa Monica Boulevard to accommodate a potential future entrance. A second knock-out panel would be provided on the northwestern side of the station box, near the intersection of Palm Avenue and Santa Monica Boulevard, to accommodate a potential future entrance on the north side of Santa Monica Boulevard.

FIGURE 2-17. SAN VICENTE/SANTA MONICA STATION – ENTRANCE OPTION 1 – SOUTH



Source: Connect Los Angeles Partners 2024

Two construction staging areas have been identified for this station: 1) on the northeast corner of Santa Monica Boulevard and Palm Avenue (0.8 acre) and 2) the current Los Angeles County Sheriff's Department West Hollywood Station on the southeast corner of Santa Monica Boulevard and San Vicente Boulevard (2.1 acres). These staging areas would be used as a TBM launch site and require a larger footprint to accommodate construction activities than a typical station.

The sidewalk zone of influence would be located on the north and south sides of Santa Monica Boulevard, between San Vicente Boulevard and Huntley Drive. At Larrabee Street, Palm Avenue, Hancock Avenue, and Huntley Drive, the sidewalk zone of influence would extend around the corners of the respective intersections. It would also cover the western edge of the construction staging area at Santa Monica Boulevard and Palm Avenue. At the intersection of San Vicente Boulevard and Santa Monica Boulevard, the sidewalk zone of influence would extend 480 feet south to include the street-facing edge of the construction staging area.

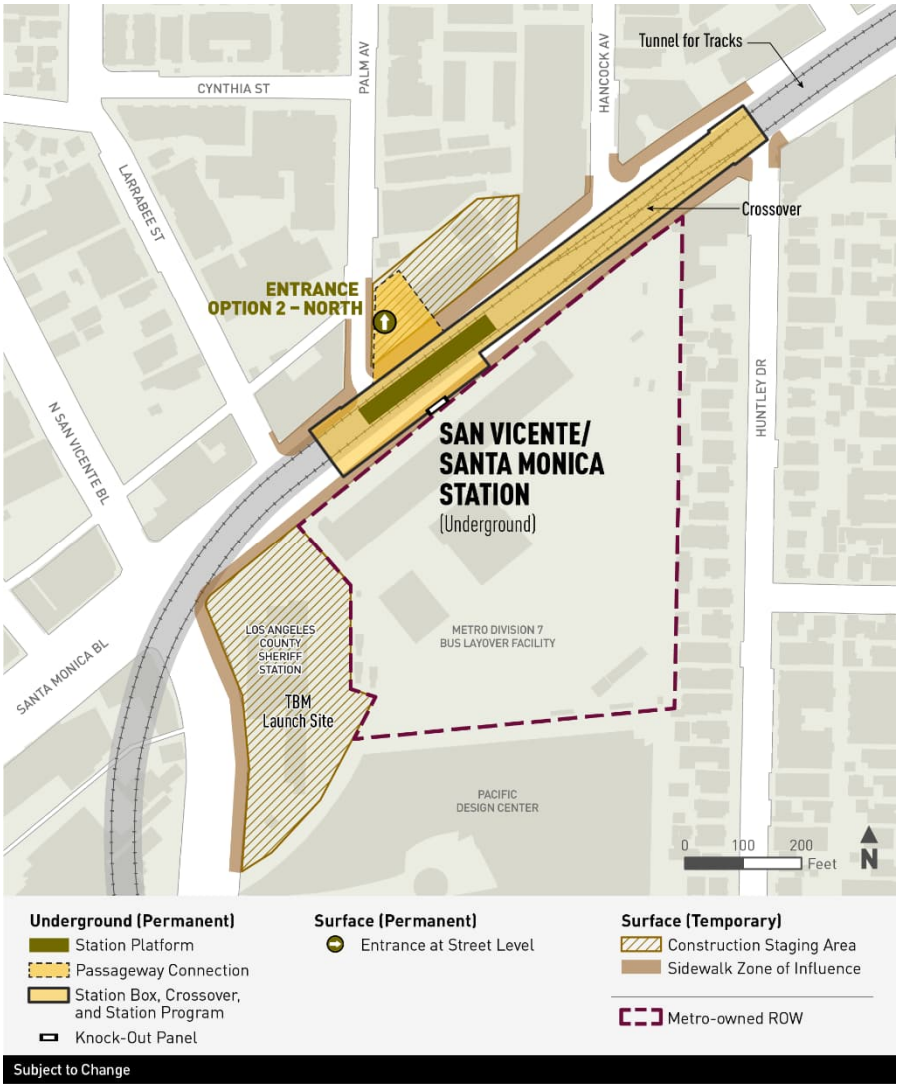
ENTRANCE OPTION 2 – NORTH

Entrance Option 2 – North would be located at the northeast corner of the intersection of Santa Monica Boulevard and Palm Avenue, as shown in Figure 2-18. A double crossover would be located on the eastern end of the station. One knock-out-panel would be provided on the southern side of the station box to accommodate a potential future entrance.

Two construction staging areas have been identified for this station: 1) on the northeast corner of Santa Monica Boulevard and Palm Avenue (0.8 acre) and 2) the current Los Angeles County Sheriff's Department West Hollywood Station on the southeast corner of Santa Monica Boulevard and San Vicente Boulevard (2.1 acres). These sites would be used as a TBM launch site and require a larger footprint to accommodate construction activities than a typical station.

The sidewalk zone of influence would be on the north and south sides of Santa Monica Boulevard, between San Vicente Boulevard and Huntley Drive. At Larrabee Street, Palm Avenue, Hancock Avenue, and Huntley Drive, the sidewalk zone of influence would extend around the corners of the respective intersections. It would also cover the construction staging area at Santa Monica Boulevard and Palm Avenue. At the intersection of San Vicente Boulevard and Santa Monica Boulevard, the sidewalk zone of influence would extend 450 feet south of the intersection to include the street-facing edge of the construction staging area.

FIGURE 2-18. SAN VICENTE/SANTA MONICA STATION – ENTRANCE OPTION 2 – NORTH



Source: Connect Los Angeles Partners 2024

FAIRFAX/SANTA MONICA STATION

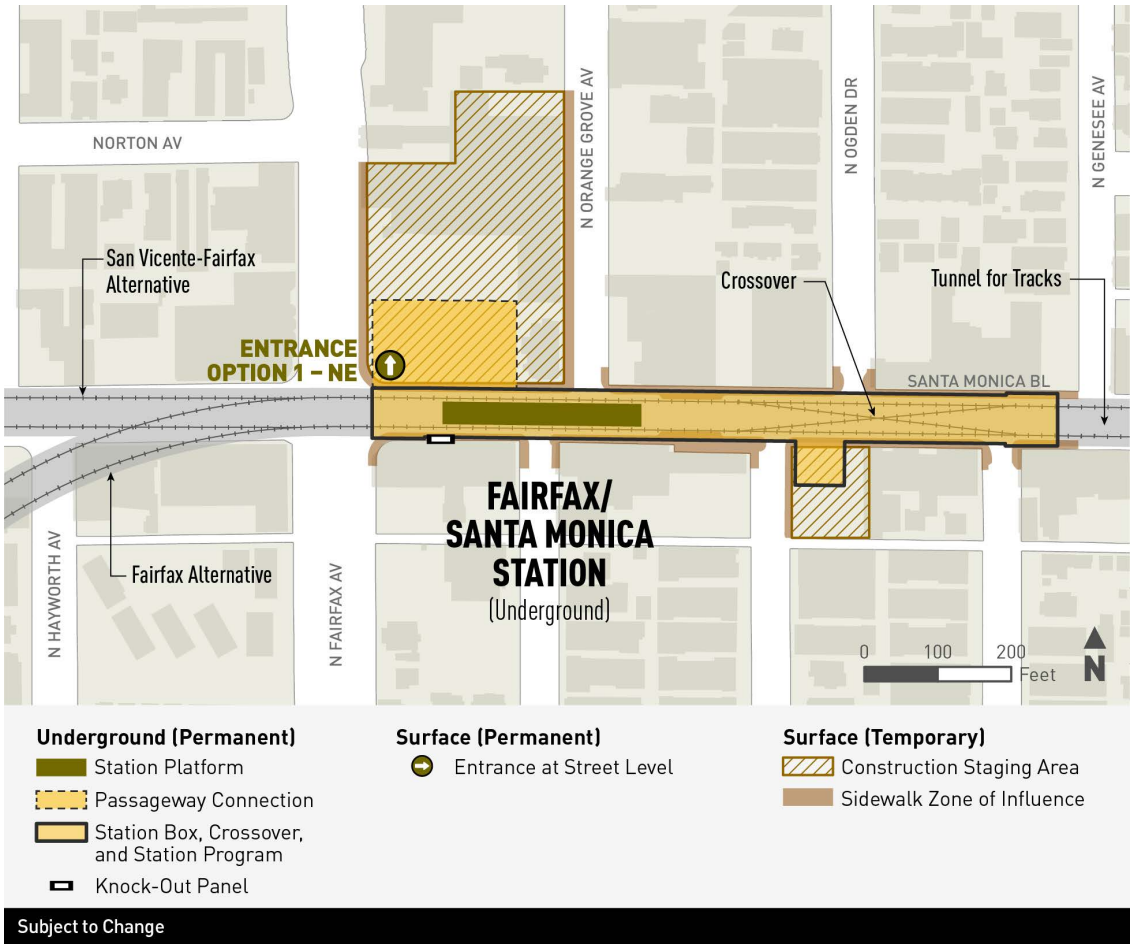
The proposed Fairfax/Santa Monica Station would be located in the City of West Hollywood, east of the intersection of Fairfax Avenue and Santa Monica Boulevard. This station would only be constructed for the San Vicente–Fairfax and Fairfax Alignments. The station box and entrance options would be in the same location for either of these alignments, but the approach from the west would vary between the two alignments.

The station box would be located below Santa Monica Boulevard. Two entrance options are proposed, although only one would be constructed.

ENTRANCE OPTION 1 – NE

Entrance Option 1 – NE, shown in Figure 2-19, would provide access at street level along Santa Monica Boulevard on the northeast corner of the Santa Monica Boulevard/Fairfax Avenue intersection. A double crossover would be located on the eastern end of the station. A knock-out panel would be provided at the south edge of the station box, southeast of the intersection of Fairfax Avenue and Santa Monica Boulevard, to accommodate a potential future entrance.

FIGURE 2-19. FAIRFAX/SANTA MONICA STATION – ENTRANCE OPTION 1 – NE



Source: Connect Los Angeles Partners 2024

Two construction staging areas have been identified for this station option: 1) on the northeast corner of Santa Monica Boulevard and Fairfax Avenue (2.3 acres) and 2) on the southeast corner of Santa Monica Boulevard and Ogden Drive (0.3 acre).

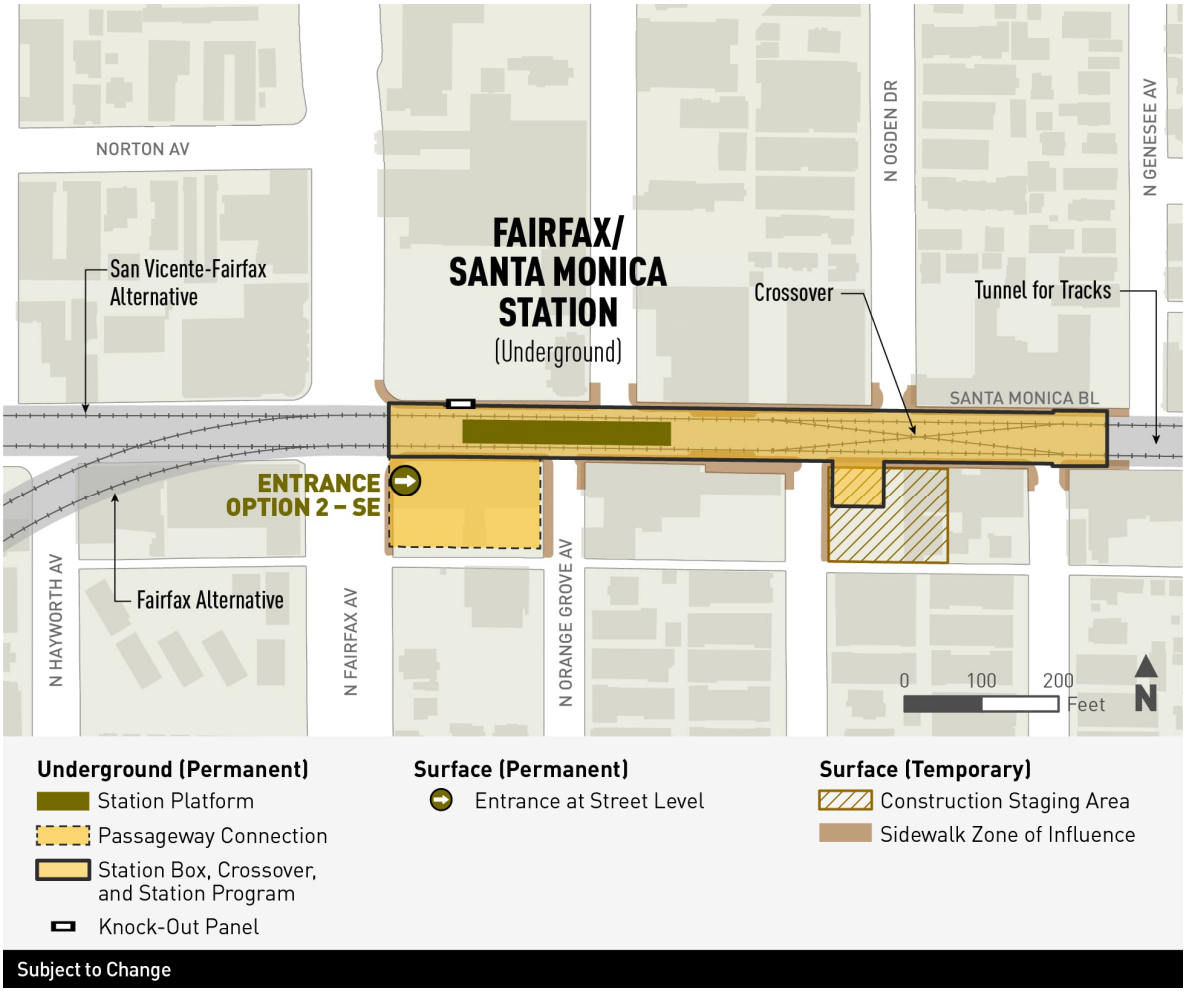
The sidewalk zone of influence would be located on the north and south sides of Santa Monica Boulevard, between Fairfax Avenue and Genesee Avenue. At Fairfax Avenue, Orange Grove Avenue, Ogden Drive, and Genesee Avenue, the sidewalk zone of influence would extend around the corner of the respective intersections. It would also include the construction staging area at Santa Monica Boulevard and Ogden

Drive. At the larger construction staging area, the sidewalk zone of influence would extend 300 feet north along the eastern edge of Fairfax Avenue and 400 feet north along the western edge of Orange Grove Avenue.

ENTRANCE OPTION 2 – SE

Shown in Figure 2-20, Entrance Option 2 – SE would provide access at street level from Fairfax Avenue on the southeast corner of the Santa Monica/Fairfax intersection. A double crossover would be located on the eastern end of the station. A knock-out panel would be provided at the north edge of the station box, northeast of the intersection of Fairfax Avenue and Santa Monica Boulevard, to accommodate a potential future entrance.

FIGURE 2-20. FAIRFAX/SANTA MONICA STATION – ENTRANCE OPTION 2 – SE



Source: Connect Los Angeles Partners 2024

Two construction staging areas have been identified at this station option: 1) on the southeast corner of Santa Monica Boulevard and Fairfax Avenue (0.5 acre) and 2) on the southeast corner of Santa Monica Boulevard and Ogden Drive (0.3 acre).

The sidewalk zone of influence would be located on the north and south sides of the street along Santa Monica Boulevard, between Fairfax Avenue and Genesee Avenue. At Fairfax Avenue, Orange Grove Avenue, Ogden Drive, and Genesee Avenue, the sidewalk zone of influence would extend around the corner of the respective intersections. The sidewalk zone of influence would also include the street-facing edges of the construction staging areas along Fairfax Avenue, Orange Grove Avenue, and Ogden Drive.

LA BREA/SANTA MONICA STATION

The proposed La Brea/Santa Monica Station would be located within the City of West Hollywood, adjacent to the border of the City of Los Angeles. This station would provide access to the commercial corridor along Santa Monica Boulevard. The location of the station box is dependent on the alignment. For the San Vicente–Fairfax and Fairfax Alignments, the station box would be underneath Santa Monica Boulevard. For the La Brea Alignment, the station box would be underneath La Brea Avenue.

This site would be used as a TBM launch site and would require a larger footprint to accommodate construction activities than would a typical station.

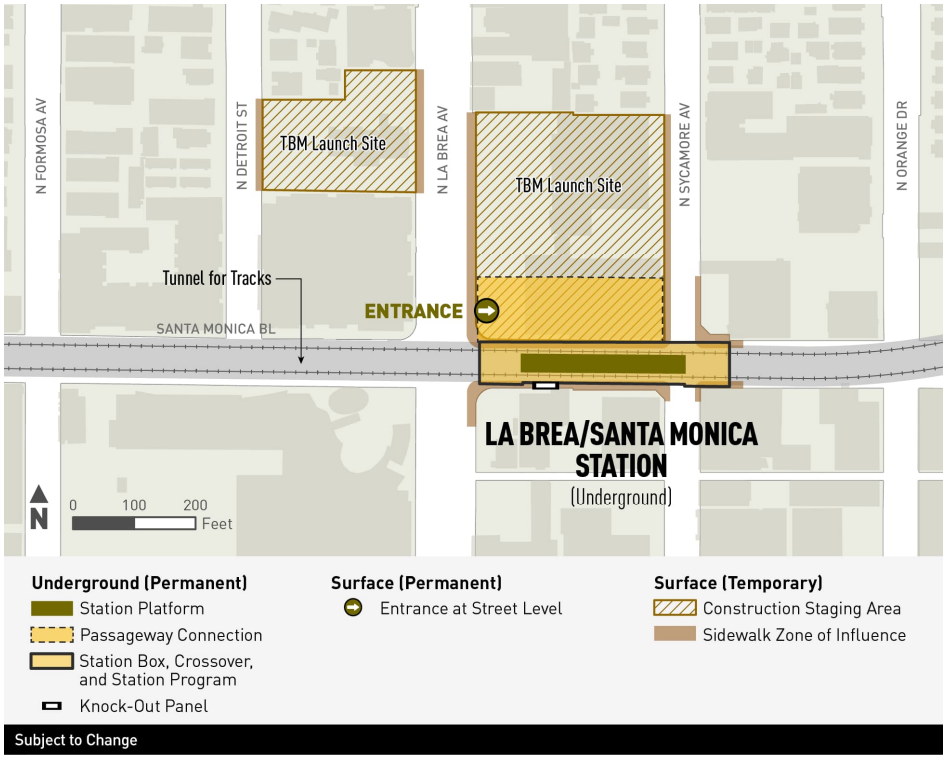
SAN VICENTE–FAIRFAX AND FAIRFAX ALIGNMENTS – LA BREA/SANTA MONICA STATION

As shown in Figure 2-21, for the San Vicente–Fairfax and Fairfax Alignments, the station platform would be located beneath Santa Monica Boulevard, east of the La Brea Avenue and Santa Monica Boulevard intersection. The station platform would be located within both the Cities of West Hollywood and Los Angeles. The station entrance would be located on the northeast corner of La Brea Avenue and Santa Monica Boulevard. A knock-out panel would be located on the southern edge of the station box, east of the intersection of Santa Monica Boulevard and La Brea Avenue, to accommodate a potential future entrance.

Two construction staging areas have been identified at this station: 1) approximately 270 feet north of Santa Monica Boulevard between Detroit Street and La Brea Avenue (1.0 acre), and 2) on the northeast corner of the Santa Monica Boulevard and La Brea Avenue intersection (2.6 acres). Both sites would be used as a TBM launch site and require a larger footprint to accommodate construction activities than would a typical station.

For the San Vicente–Fairfax and Fairfax Alignments, the sidewalk zone of influence would be located on the north and south sides of Santa Monica Boulevard between La Brea Avenue and Orange Drive. At La Brea Avenue, Sycamore Avenue, and Orange Drive, the sidewalk zone of influence would extend around the corners of the respective intersections. The sidewalk zone of influence would also include all street-facing edges of both construction staging areas along Detroit Street, La Brea Avenue, and Sycamore Avenue.

FIGURE 2-21. LA BREA/SANTA MONICA STATION (SAN VICENTE–FAIRFAX AND FAIRFAX ALIGNMENTS)



Source: Connect Los Angeles Partners 2024

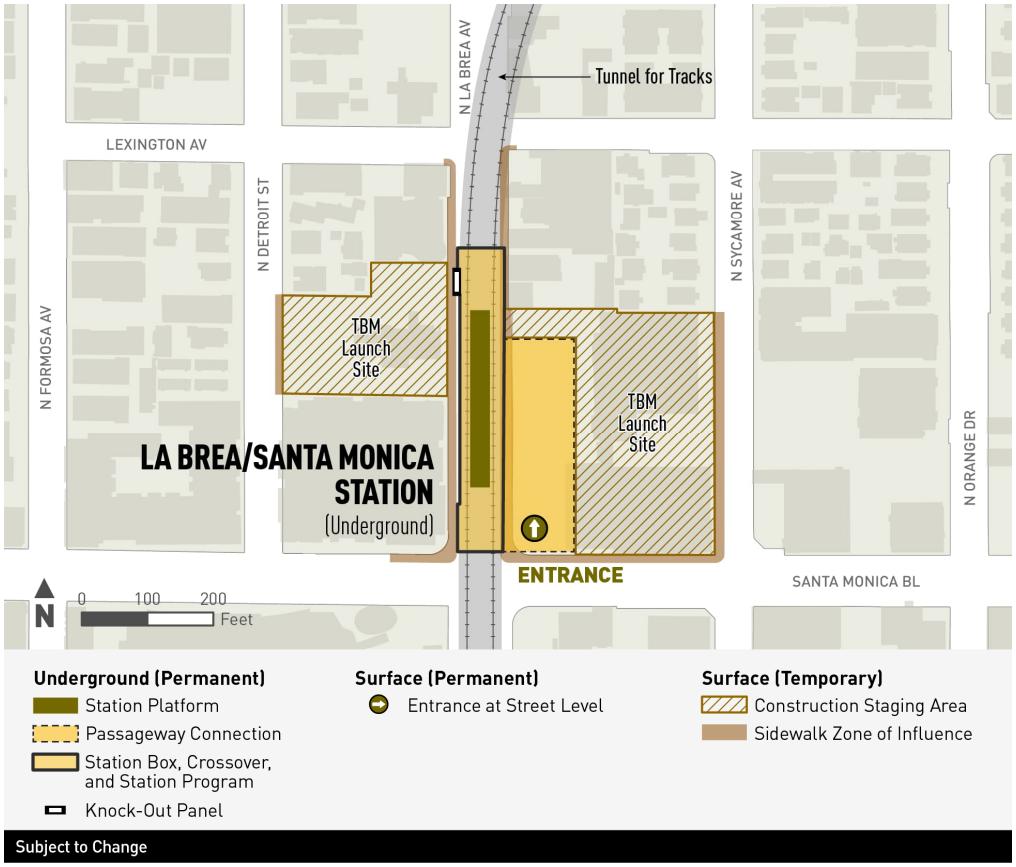
LA BREA ALIGNMENT– LA BREA/SANTA MONICA STATION

For the La Brea Alignment, the station platform would be beneath La Brea Avenue, north of the La Brea Avenue and Santa Monica Boulevard intersection (Figure 2-22). A station entrance would provide access at street level along Santa Monica Boulevard, on the northeast corner of the La Brea/Santa Monica intersection. A knock-out panel would be located along the northwest edge of the station box along La Brea Avenue, 360 feet south of the intersection of La Brea Avenue and Lexington Avenue, to accommodate a potential future entrance.

Two construction staging areas have been identified at this station: 1) approximately 270 feet north of Santa Monica Boulevard between Detroit Street and La Brea Avenue (1.0 acre) and 2) on the northeast corner of the Santa Monica Boulevard and La Brea Avenue intersection (2.6 acres). Both sites would be used as a TBM launch site and require a larger footprint to accommodate construction activities than would a typical station.

The sidewalk zone of influence would be located on the east and west sides of La Brea Avenue between Santa Monica Boulevard and Lexington Avenue. The zone of influence would extend around the corners of the respective intersections at Santa Monica Boulevard and Lexington Avenue. Along Santa Monica Boulevard, the sidewalk zone of influence would extend 320 feet east to the intersection of Santa Monica Boulevard and Sycamore Avenue. The sidewalk zone of influence would also include all street-facing edges of both construction staging areas along Detroit Street and Sycamore Avenue.

FIGURE 2-22. LA BREA/SANTA MONICA STATION (LA BREA ALIGNMENT)



Source: Connect Los Angeles Partners 2024

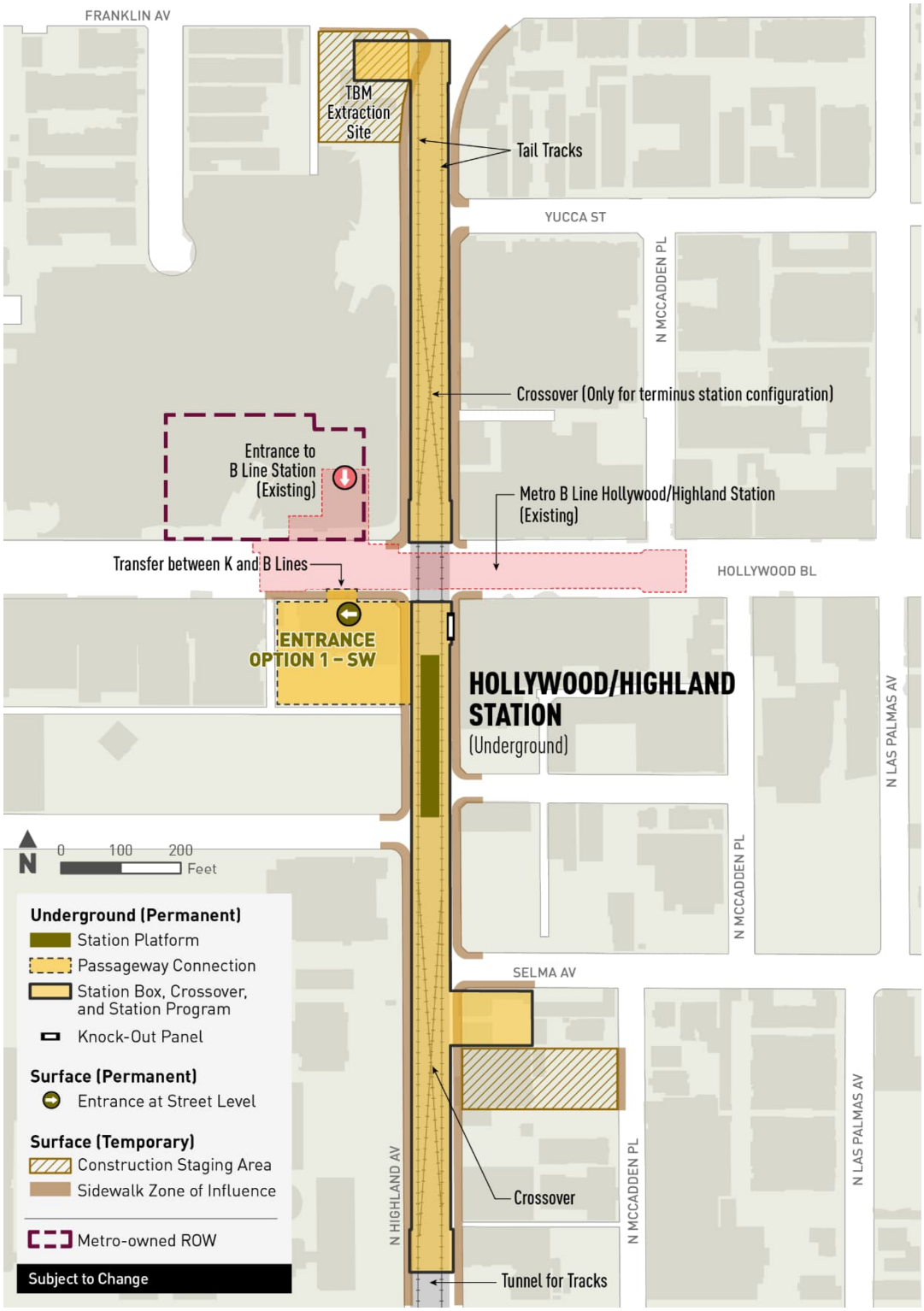
HOLLYWOOD/HIGHLAND STATION

The proposed Hollywood/Highland Station (Figure 2-23 and Figure 2-24) would be located in the City of Los Angeles and would provide a connection to the existing Metro B Line Hollywood/Highland Station, which is located below Hollywood Boulevard at the intersection of Hollywood Boulevard and Highland Avenue with an entrance on the northwest corner of the intersection. The KNE station box would be located beneath Highland Avenue south of Hollywood Boulevard. This station would be constructed for all alignments.

Under the sequential construction approach described in Section 2.4.5, this station would be the northern terminus of Section 3 for the San Vicente–Fairfax Alignment and Section 2 for the Fairfax and La Brea Alignments, unless the Hollywood Bowl Design Option is constructed.

Two station entrance options are proposed, although only one entrance would be constructed. Entrance Option 1 – SW is located on the southwest corner of Hollywood Boulevard and Highland Avenue. Entrance Option 2 – SE is located on the southeast corner of Hollywood Boulevard and Highland Avenue. For each station entrance option, a connection to the existing Metro B Line station would be provided at the concourse level, allowing passengers to transfer between the K Line and B Line.

FIGURE 2-23. HOLLYWOOD/HIGHLAND STATION – TERMINUS STATION, ENTRANCE OPTION 1 – SW



Source: Connect Los Angeles Partners 2024

If constructed as a terminus station, a double crossover would be located south of the station platform and north of the B Line crossing under Highland Avenue. In addition to the crossover north of Hollywood Boulevard, tail tracks, which are stub-end tracks located beyond a terminal station to allow trains to exit the platform area or move to the other track, would extend north to Franklin Avenue and the TBM would be extracted at the northern end of the tail tracks. An end shaft would be required at the end of the tail tracks of the Hollywood/Highland terminus station to accommodate cross passages, stairways, ventilation plenum, and possibly emergency ventilation fans (Figure 2-23 and Figure 2-24). The end shaft, a circular or rectangular shaft with a minimum footprint area of 1,600 square feet, would be constructed by shaft sinking or support of excavation piles/walls.

If the alignment continues north to the Hollywood Bowl as proposed for the Hollywood Bowl Design Option, the Hollywood/Highland Station would be constructed as an inline station rather than a terminus station. This configuration with the Hollywood Bowl Design Option is described in Section 2.4.2.

ENTRANCE OPTION 1 – SW – TERMINUS STATION

Under Entrance Option 1 – SW (Figure 2-23), the entrance would be located on the southwest corner of Hollywood Boulevard and Highland Avenue. Passengers would transfer between the K Line and the B Line using the station concourse level via the existing knock-out-panel on the southwest corner of the existing Hollywood/Highland station box. A knock-out panel would be included on the eastern side of the KNE station box, at the southeast corner of Hollywood Boulevard and Highland Avenue, to accommodate a future entrance option.

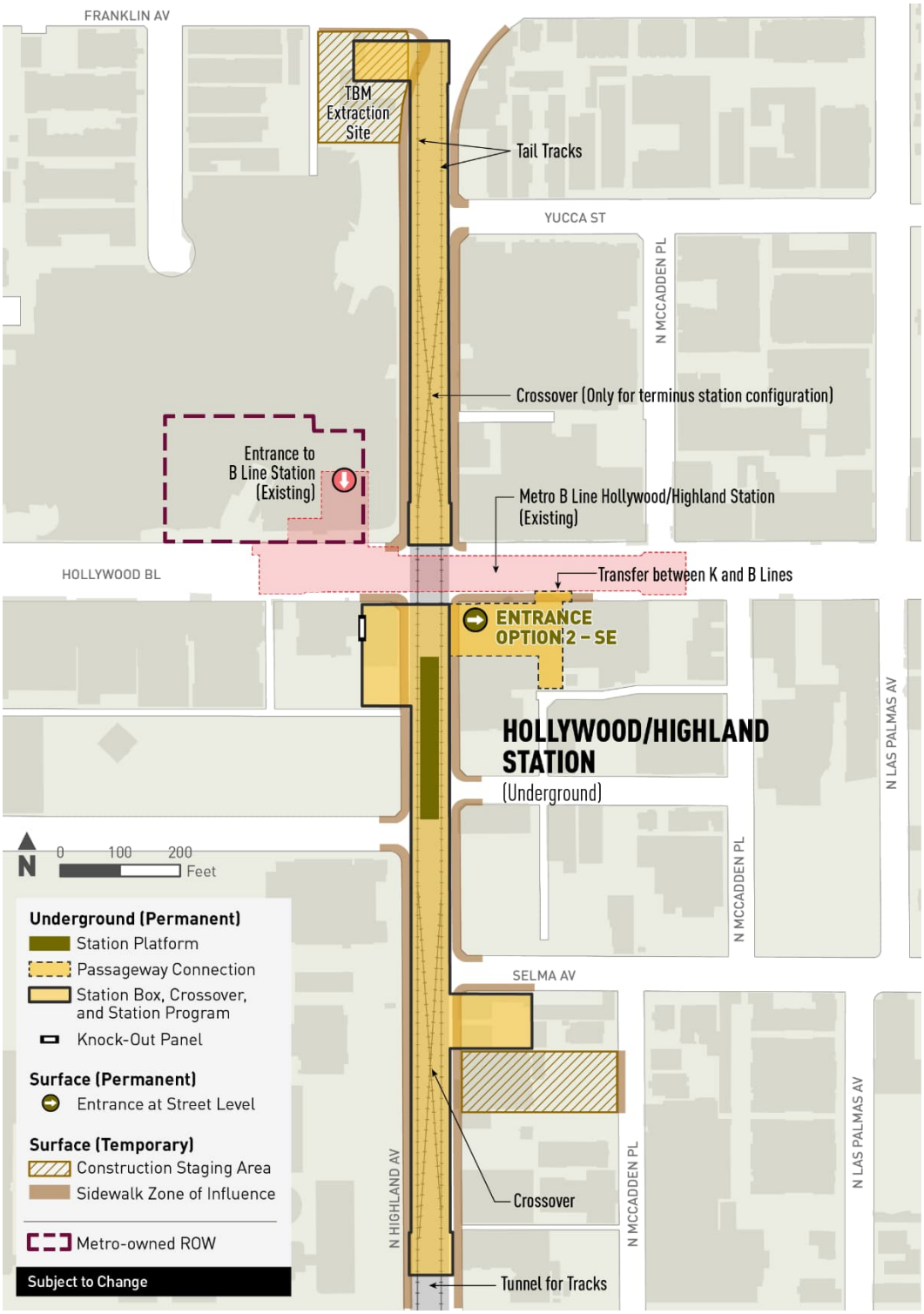
Three construction staging areas have been identified at this station: 1) at the southeast corner of Highland Avenue and Selma Avenue (0.9 acre), 2) at the southwest corner of Hollywood Boulevard and Highland Avenue (0.9 acre), and 3) at the southwest corner of Franklin Avenue and Highland Avenue (0.7 acre).

For Entrance Option 1, the sidewalk zone of influence would be located on the east and west sides of Highland Avenue, between Sunset Boulevard and Franklin Avenue. At Selma Avenue, Hawthorn Avenue, Hollywood Boulevard, Yucca Street, and Franklin Avenue, the sidewalk zone of influence would extend around the corner of the respective intersections. The sidewalk zone of influence would also include all street-facing edges of the construction staging areas along Hollywood Boulevard, Selma Avenue, McCadden Place, and Franklin Avenue.

ENTRANCE OPTION 2 – SE – TERMINUS STATION

Under Entrance Option 2 – SE (Figure 2-24), the entrance would be located on the southeast corner of Hollywood Boulevard and Highland Avenue. Passengers would transfer between the K Line and B Line at the concourse level via the existing knock-out-panel on the southeast corner of the existing Hollywood/Highland Station. A knock-out panel would be included on the western side of the K Line station box, near the southwest corner of Hollywood Boulevard and Highland Avenue, to accommodate a future entrance option.

FIGURE 2-24. HOLLYWOOD/HIGHLAND STATION – TERMINUS STATION, ENTRANCE OPTION 2 – SE



Source: Connect Los Angeles Partners 2024

Four potential construction staging areas have been identified at this station: 1) at the southeast corner of Highland Avenue and Selma Avenue (0.9 acre), 2) at the southeast corner of Hollywood Boulevard and Highland Avenue (0.4 acre), 3) at the southwest corner of Hollywood Boulevard and Highland Avenue (0.3 acre) and 4) at the southwest corner of Franklin Avenue and Highland Avenue (0.7 acre).

For Entrance Option 2, the sidewalk zone of influence would be located on the east and west sides of Highland Avenue between Sunset Boulevard and Franklin Street. At Selma Avenue, Hawthorn Avenue, Hollywood Boulevard, Yucca Street, and Franklin Avenue, the sidewalk zone of influence would extend around the corner of the respective intersections. The sidewalk zone of influence would also include all street-facing edges of the construction staging areas along Hollywood Boulevard, Selma Avenue, McCadden Place, and Franklin Avenue.

WILSHIRE/LA BREA STATION

The proposed Wilshire/La Brea Station would provide a connection to the currently under construction Metro D Line Wilshire/La Brea Station, which is located below Wilshire Boulevard at the intersection of Wilshire Boulevard and La Brea Avenue. The KNE station would be connected to the future Metro D Line Station through the concourse level of both stations, allowing pedestrians to transfer between the K Line and D Line via the existing knock-out panel in the D Line station. This station would only be constructed for the KNE La Brea Alignment.

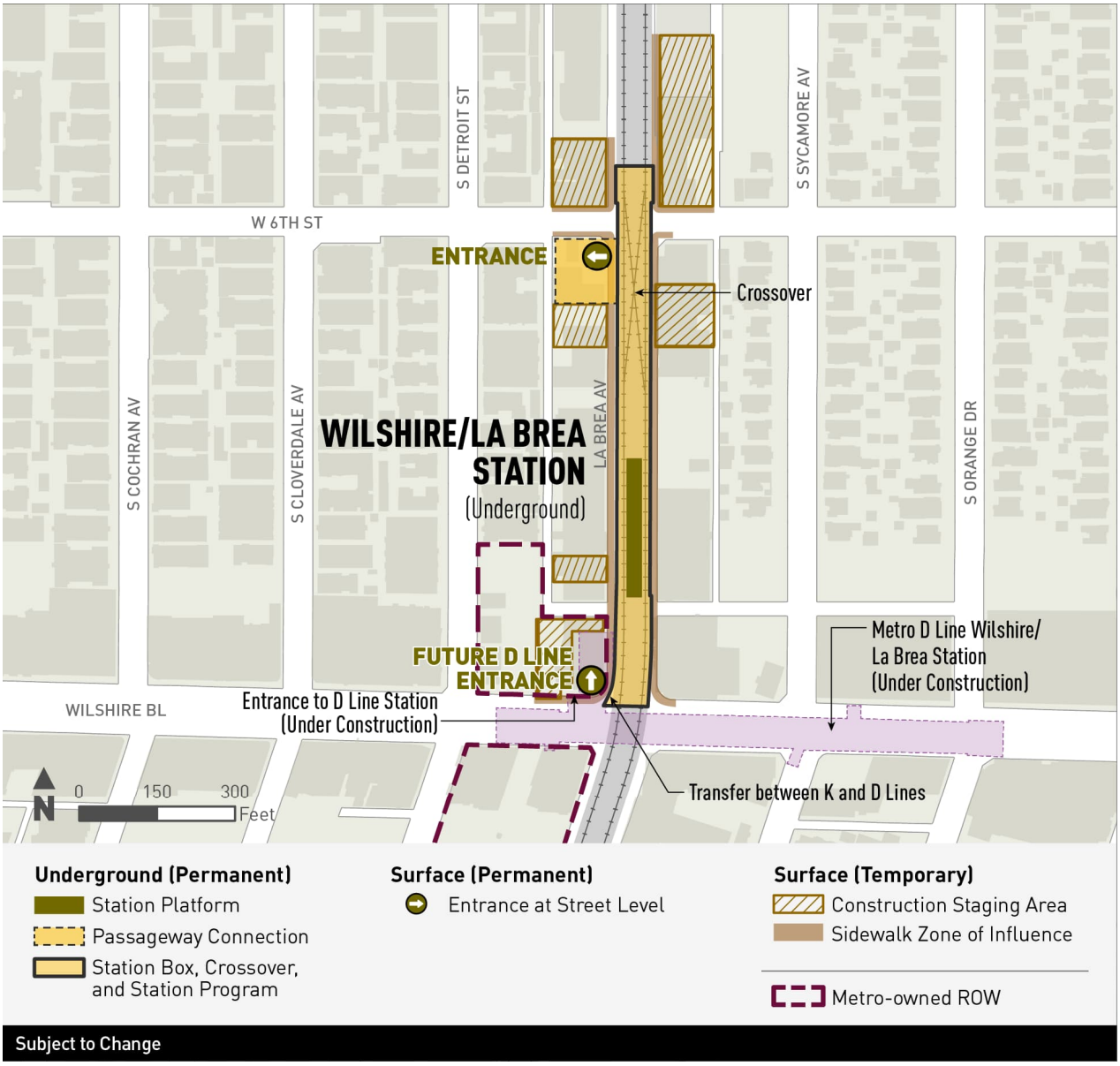
The proposed KNE station box would be located beneath La Brea Avenue, north of the Wilshire Boulevard and La Brea Avenue intersection, and south of 6th Street. A double crossover would be located north of the station box, extending to just north of 6th Street.

One new station entrance would be constructed on the southwest corner of the intersection of La Brea Avenue and 6th Street, as shown in Figure 2-25. The future D Line entrance on the northwest corner of Wilshire Boulevard and La Brea Avenue would also provide access to both the D Line and K Line through the concourse level.

Six construction staging areas have been identified for this station option: 1) the northwest corner of Wilshire Boulevard and La Brea Avenue (0.2 acre), 2) 300 feet north of the intersection of Wilshire Boulevard and La Brea Avenue (0.1 acre), 3) the southwest corner of 6th Street and La Brea Avenue (0.5 acre), 4) the northwest corner of 6th Street and La Brea Avenue (0.3 acre), 5) the northeast corner of 6th Street and La Brea Avenue (0.7 acre), and 6) 175 feet southeast of the intersection of 6th Street and La Brea Avenue (0.3 acre).

The sidewalk zone of influence would be located on the east and west sides of La Brea Avenue between 6th Street and Wilshire Boulevard. At 6th Street and Wilshire Boulevard, the sidewalk zone of influence would extend around the corners of the respective intersections. At the intersection of Wilshire Boulevard and La Brea Avenue, the sidewalk zone of influence would be present only on the northwest and northeast corners.

FIGURE 2-25. WILSHIRE/LA BREA STATION



Source: Connect Los Angeles Partners 2024

LA BREA/BEVERLY STATION

The proposed La Brea/Beverly Station would be located beneath La Brea Avenue, north of the La Brea Avenue and Beverly Boulevard intersection. A double crossover would be located at the northern end of the station and extend just north of Oakwood Avenue. This station would only be constructed for the La Brea Alignment. Two entrance options have been identified for this station, although only one would be constructed.

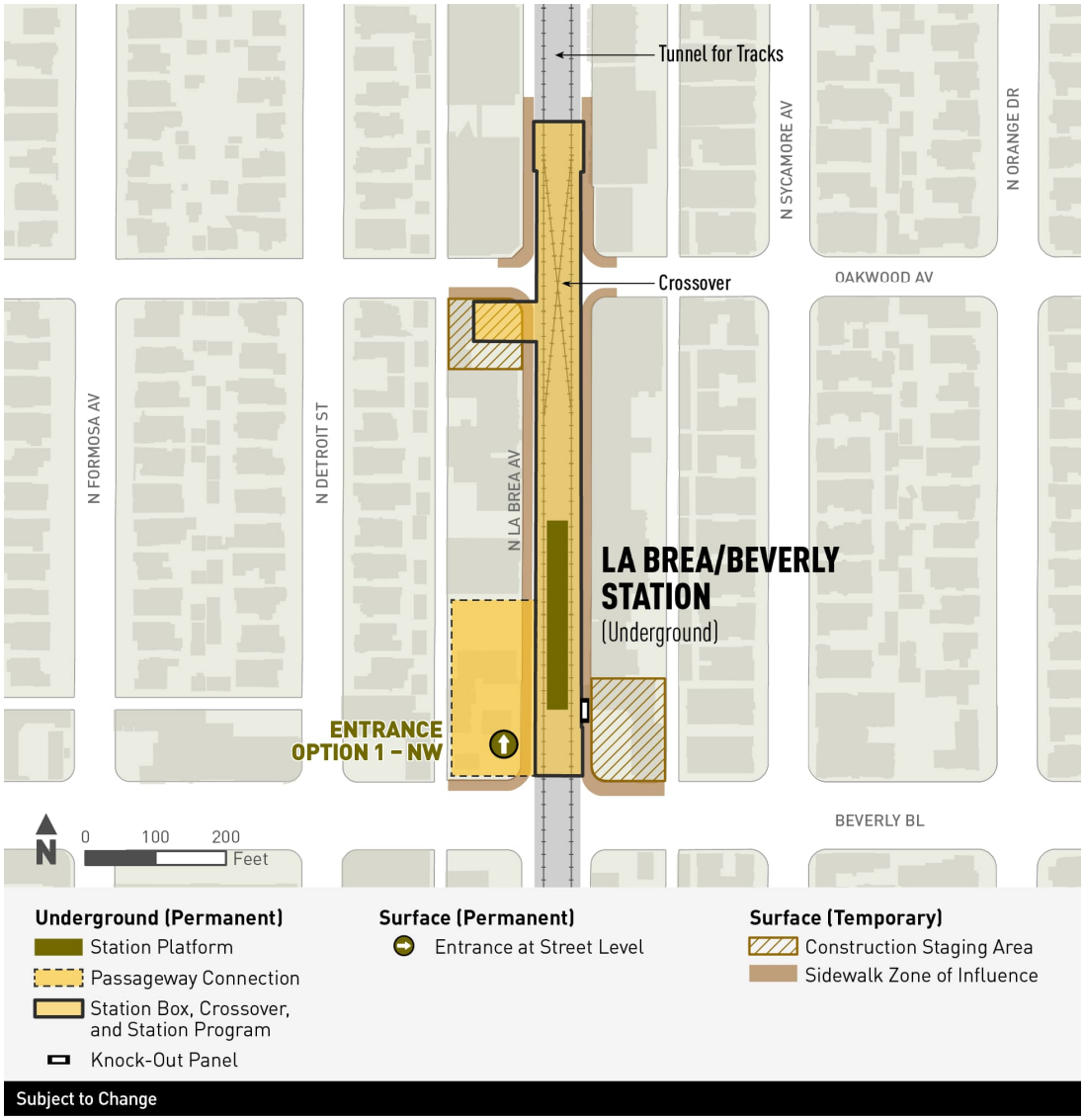
ENTRANCE OPTION 1 – NW

Entrance Option 1 – NW, shown in Figure 2-26, would provide access to the station at street level along Beverly Boulevard on the northwest corner of the La Brea Avenue and Beverly Boulevard intersection. A knock-out panel would be located at the southeastern end of the station box to accommodate a future entrance option.

Three construction staging areas have been identified: 1) at the southwest corner of Oakwood Avenue and La Brea Avenue (0.2 acre), 2) at the northwest corner of Beverly Boulevard and La Brea Avenue (0.6 acre), and 3) at the northeast corner of Beverly Boulevard and La Brea Avenue (0.3 acre).

The sidewalk zone of influence would be located on the east and west sides of La Brea Avenue between Beverly Boulevard and Oakwood Avenue. The northern extent of the sidewalk zone of influence would begin approximately 320 feet north of the La Brea Avenue and Oakwood Avenue intersection. At Beverly Boulevard and Oakwood Avenue, the sidewalk zone of influence would extend around the corner of the respective intersections.

FIGURE 2-26. LA BREA/BEVERLY STATION – ENTRANCE OPTION 1 – NW



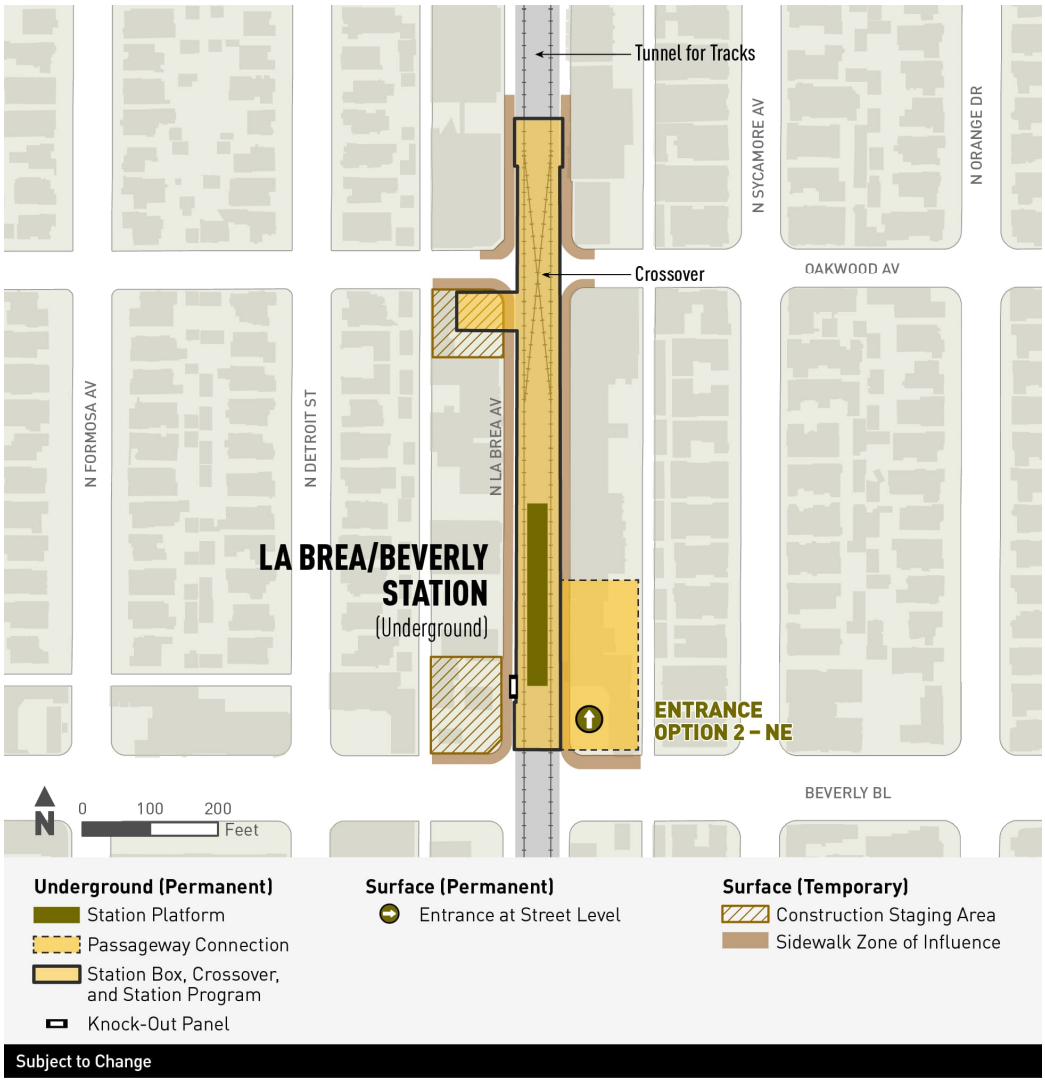
Source: Connect Los Angeles Partners 2024

ENTRANCE OPTION 2 – NE

As shown in Figure 2-27, Entrance Option 2 – NE would provide station access at street level along Beverly Boulevard on the northeast corner of the intersection. A knock-out panel would be located at the southwestern end of the station box to accommodate a future entrance option.

Three potential construction staging areas have been identified: 1) at the southwest corner of the Oakwood Avenue and La Brea Avenue intersection (0.2 acre), 2) at the northwest corner of Beverly Boulevard and La Brea Avenue (0.3 acre), and 3) at the northeast corner of Beverly Boulevard and La Brea Avenue (0.6 acre).

FIGURE 2-27. LA BREA/BEVERLY STATION – ENTRANCE OPTION 2 – SE



Source: Connect Los Angeles Partners 2024

The sidewalk zone of influence would be located on the east and west sides of La Brea Avenue between Beverly Boulevard and Oakwood Avenue and would extend approximately 320 feet north of Oakwood Avenue to the northern end of the station box. At Beverly Boulevard and Oakwood Avenue, the sidewalk zone of influence would extend around the corner of the respective intersections.

2.4.2 HOLLYWOOD BOWL DESIGN OPTION

For all three alignments, an alternate terminus station at the Hollywood Bowl is under consideration. The design option would construct and operate one new station (the Hollywood Bowl Station) and the associated underground alignment. This station would primarily serve the Hollywood Bowl venue, although some dense multifamily housing is located near the proposed station, particularly along Cahuenga Boulevard and north of Franklin Avenue. The Hollywood Bowl Design Option is illustrated in Figure 2-28. This design option would extend an additional 0.8 mile underground from the Hollywood/Highland Station to the tail tracks north of the Hollywood Bowl Station.

From the Hollywood/Highland Station, the alignment would continue north beneath Highland Avenue. At the intersection of Highland Avenue and Franklin Avenue, the alignment would continue north before curving northeast to continue north beneath Highland Avenue. The alignment would connect to the Hollywood Bowl Station, terminating southwest of the US-101. The alignment for the Hollywood Bowl Station would require approximately 4,200 feet of additional tunnel from the Hollywood/Highland Station. The tunnel would cross the Hollywood fault zone for 1,200 feet, requiring a design consistent with Metro standards specific to crossing faults.

Under the Hollywood Bowl Design Option, the Hollywood/Highland Station would be an inline station instead of a terminus station, which means the crossover and tail tracks north of the Hollywood/Highland Station would not be required. These components would instead be required at the Hollywood Bowl Station. For all three alignments, the configuration and construction method of the Hollywood Bowl Design Option would be the same.

The Hollywood Bowl Design Option would be constructed at the same time as the Hollywood/Highland Station in the final construction section and would not be a separate future phase. The configuration of the inline Hollywood/Highland Station is described below, followed by a description of the Hollywood Bowl Station.

FIGURE 2-28. ALTERNATE TERMINUS STATION AT THE HOLLYWOOD BOWL

Source: Connect Los Angeles Partners 2024

HOLLYWOOD/HIGHLAND STATION – INLINE

If the proposed Hollywood/Highland Station were constructed as an inline station, the station box and crossover footprint would be located south of the intersection underneath Highland Avenue. A double crossover would only be located south of the station platform. Similar to the Hollywood/Highland terminus option, two station entrances are being considered, but only one would be constructed.

ENTRANCE OPTION 1 – SW

Under Entrance Option 1 – SW (Figure 2-29), the entrance would be located on the southwest corner of Hollywood Boulevard and Highland Avenue. A knock-out panel would be located at the northeast corner of the station box to accommodate a future entrance option.

Two construction staging areas have been identified at this station: 1) at the southeast corner of Highland Avenue and Selma Avenue (0.9 acre) and 2) at the southwest corner of Hollywood Boulevard and Highland Avenue (0.9 acre).

For Entrance Option 1 – SW, the sidewalk zone of influence would be located on the east and west sides of Highland Avenue between Sunset Boulevard and Hollywood Boulevard. At Selma Avenue, Hawthorn Avenue, and Hollywood Boulevard, the sidewalk zone of influence would extend around the corner of the respective intersections. The sidewalk zone of influence would also include all street-facing edges of the construction staging areas along Hollywood Boulevard, Selma Avenue, and McCadden Place.

FIGURE 2-29. HOLLYWOOD/HIGHLAND STATION – INLINE STATION, ENTRANCE OPTION 1

Source: Connect Los Angeles Partners 2024

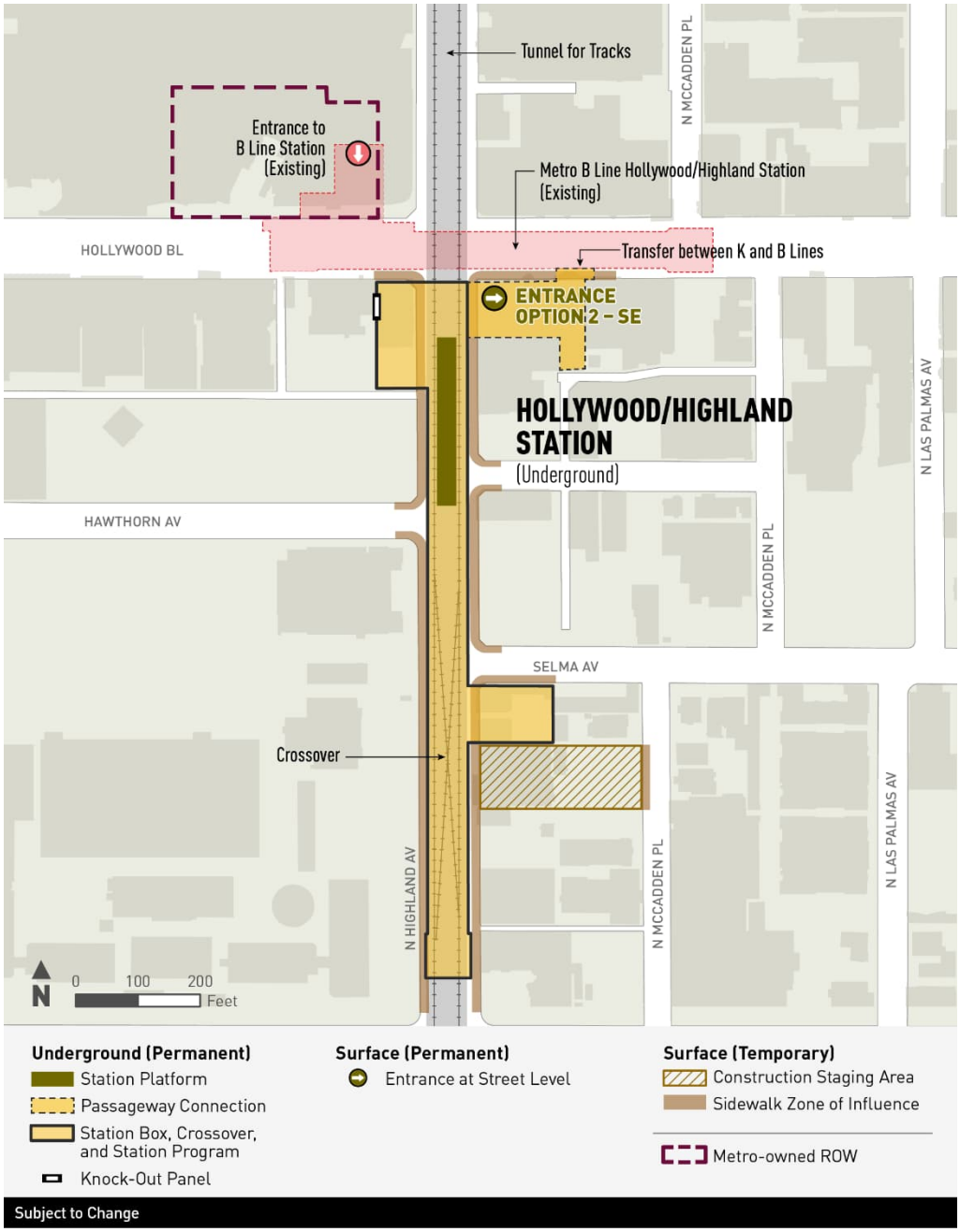
ENTRANCE OPTION 2 – SE

With Entrance Option 2 – SE (Figure 2-30), the entrance would be located on the southeast corner of Hollywood Boulevard and Highland Avenue. A knock-out panel would be located at the northwest corner of the station box to accommodate a future entrance option.

Three construction staging areas have been identified at this station: 1) at the southeast corner of Highland Avenue and Selma Avenue (0.9 acre), 2) at the southeast corner of Hollywood Boulevard and Highland Avenue (0.4 acre), and 3) at the southwest corner of Hollywood Boulevard and Highland Avenue (0.3 acre).

For Entrance Option 2, the sidewalk zone of influence would be located on the east and west sides of Highland Avenue between Sunset Boulevard and Hollywood Boulevard. At Selma Avenue, Hawthorn Avenue, and Hollywood Boulevard, the sidewalk zone of influence would extend around the corner of the respective intersections. The sidewalk zone of influence would also include all street-facing edges of the construction staging areas along Hollywood Boulevard, Selma Avenue, and McCadden Place.

FIGURE 2-30. HOLLYWOOD/HIGHLAND STATION – INLINE STATION, ENTRANCE OPTION 2



Source: Connect Los Angeles Partners 2024

HOLLYWOOD BOWL STATION

The proposed Hollywood Bowl Station would be located beneath Highland Avenue and Odin Street, north of Milner Road and south of the US-101 Freeway (Figure 2-31 and Figure 2-32). Two entrance options are under consideration, although only one entrance would be constructed.

ENTRANCE OPTION 1 – WEST

Entrance Option 1 would provide access at street level on the western end of Highland Avenue at the existing Hollywood Bowl Parking Lot B. An existing pedestrian tunnel between Parking Lot A, Parking Lot B, and Parking Lot C underneath Highland Avenue would remain in its current configuration.

Due to terminus station requirements, double crossovers would be located both on the southern end and northern end of the station. Tail tracks would also extend north of the northern crossover. An end shaft would also be required at the end of the tail tracks of the station to accommodate cross passages, stairways, ventilation plenum, and possibly emergency ventilation fans (Figure 2-31 and Figure 2-32).

Three construction staging areas have been identified: 1) at the Hollywood Bowl Parking Lot B on Highland Avenue (0.7 acre), 2) between Parking Lot D on Odin Street and the Hollywood Heritage Museum parking lot on Milner Road (3.5 acres), and 3) along the western edge of Cahuenga Boulevard, north of the Pilgrimage Bridge (0.1 acre). Due to high traffic volumes along Highland Avenue as well as the geological conditions in the area, this station would be constructed via the sequential excavation method (SEM) rather than the standard cut-and-cover construction. This approach would reduce surface impacts along Highland Avenue.

The sidewalk zone of influence would be located mainly along Highland Avenue between Milner Road and the US-101 entrance ramp adjacent to Parking Lot C. A portion of Odin Street between Lots C and D, as well as the existing bus terminal near Parking Lot B on Highland Avenue, would also be within the sidewalk zone of influence. At Odin Street and Highland Avenue, the sidewalk zone of influence would extend around the corner of the eastern intersections. In the north, the sidewalk on Cahuenga Boulevard adjacent to the construction staging area would also be part of the sidewalk zone of influence.

FIGURE 2-31. HOLLYWOOD BOWL STATION – ENTRANCE OPTION 1

Source: Connect Los Angeles Partners 2024

ENTRANCE OPTION 2 – EAST

Entrance Option 2 would provide access to the eastern end of Highland Avenue at the existing Hollywood Bowl Parking Lot C. An existing pedestrian tunnel between Parking Lot A, Parking Lot B, and Parking Lot C underneath Highland Avenue would remain in its current configuration.

Due to terminus station requirements, double crossovers would be located both on the southern end and northern end of the station. Tail tracks would also extend north of the northern crossover.

Three construction staging areas have been identified: 1) Parking Lot C on Odin Street (0.6 acre), 2) between Parking Lot D on Odin Street and the Hollywood Heritage Museum parking lot on Milner Road (3.5 acres), and 3) along the western edge of Cahuenga Boulevard, north of Pilgrimage Bridge (0.1 acre). Due to high traffic volumes along Highland Avenue as well as the geological conditions in the area, this station would be constructed via SEM rather than the standard cut-and-cover construction. This approach would reduce surface impacts along Highland Avenue.

The sidewalk zone of influence would be located mainly along the eastern side of Highland Avenue between Milner Road and the US-101 entrance ramp adjacent to Parking Lot C. A portion of Odin Street between Lots C and D, as well as the existing bus terminal near Parking Lot B on Highland Avenue, would also be within the sidewalk zone of influence. At Odin Street and Highland Avenue, the sidewalk zone of influence would extend around the corner of the eastern intersections. In the north, the sidewalk on Cahuenga Boulevard adjacent to the construction staging area would also be part of the sidewalk zone of influence.

FIGURE 2-32. HOLLYWOOD BOWL STATION – ENTRANCE OPTION 2

Source: Connect Los Angeles Partners 2024

2.4.3 MAINTENANCE AND STORAGE FACILITY

An MSF is necessary to provide daily servicing and cleaning, inspection and repairs, and storage of light rail vehicles (LRVs). As currently designed, the existing Metro Division 16 site that serves the existing K Line, has insufficient capacity to accommodate the additional vehicles that would be required to operate KNE.

Due to the dense urban environment along the project corridor, a suitable site with compatible land uses could not be identified in the immediate vicinity of the KNE alignments. Instead, the proposed MSF would be located adjacent to the existing Division 16 MSF yard near LAX, and would expand Division 16 to the southwest to provide the additional needed capacity (Figure 2-33). The proposed MSF expansion would allow Metro to maintain all its operations for the K Line within one site and would avoid duplication of facilities.

FIGURE 2-33. KNE PROPOSED MSF SITE MAP

Source: Connect Los Angeles Partners 2024

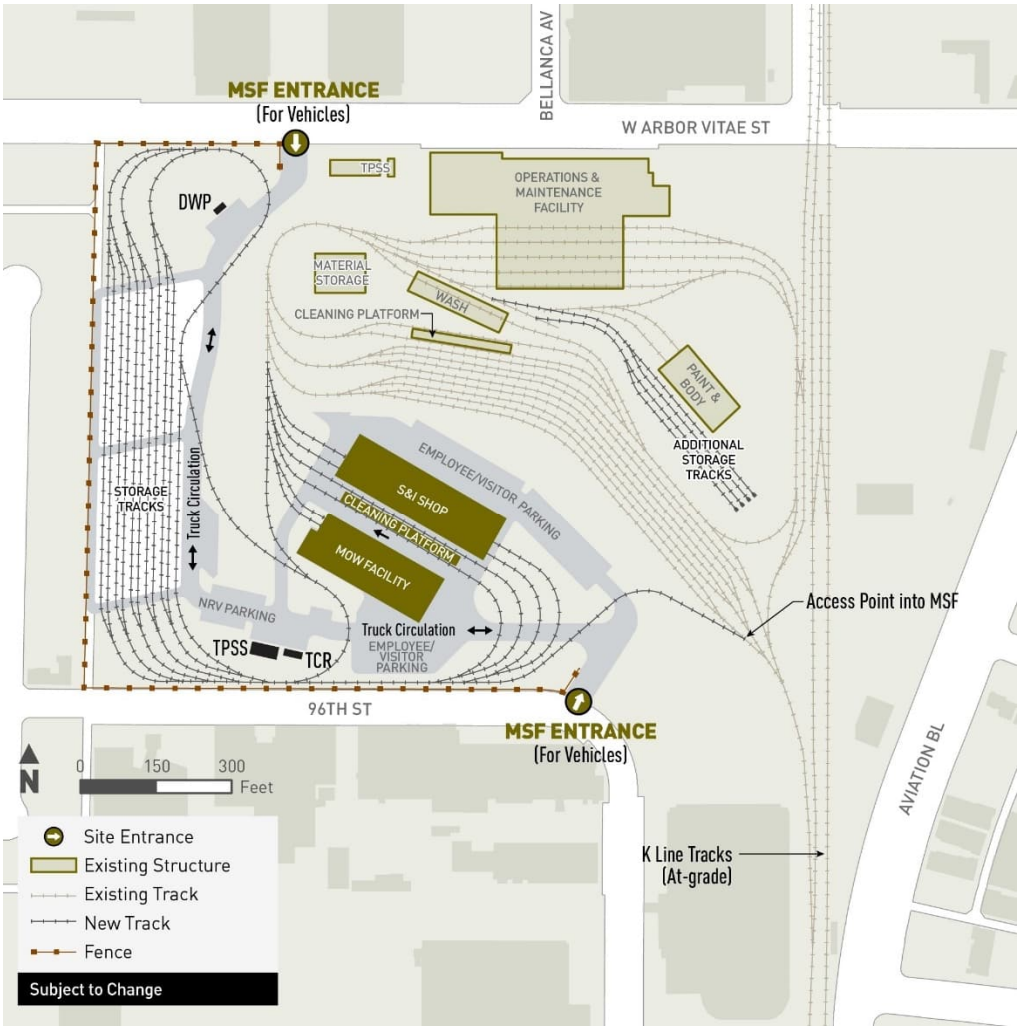
The proposed MSF site is a 16.1-acre expansion of the existing Division 16 yard to the southwest and would be located between Arbor Vitae Street and 96th Street in the City of Los Angeles. As shown in Figure 2-34, the MSF would accommodate storage of the additional vehicle requirements for KNE, as well as the required supporting facilities, including a new service and inspection shop, cleaning platform, maintenance-of-way (MOW) facility, storage tracks, parking spaces, and systems components. The existing Division 16 yard currently provides a train wash building, operations and maintenance facility, yard tower, and paint and body building that would be used to service the LRVs. The site would provide the required 36 vehicle storage capacity, along with space for up to four additional storage tracks that could accommodate up to 12 additional vehicles if needed in the future. The MSF expansion would include approximately 180 new parking spaces for employee vehicles and maintenance vehicles in addition to the existing 180 spaces—based on February 2024 Google Earth imagery—for a total of approximately 360 parking spaces. Similar to the existing Division 16 site, landscaping would be planted around the periphery of the site. The MSF would not require modifications to the existing mainline tracks since it would access the yard the same way LRVs currently access the existing Division 16 yard. The currently under construction LAX Automated People Mover will run on elevated tracks along the southern edge of the MSF site. Vehicle access to and from the MSF would be provided via Arbor Vitae Street and 96th Street.

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, unscheduled maintenance, wheel truing, and blowdowns. These maintenance activities are necessary for operation of KNE. Two inspection tracks would be included in the proposed expanded MSF, one heavy repair/component changeout track and one track featuring the wheel truing machine and blowdown area. Each track would be able to accommodate three LRVs and would be set up to complete maintenance activities on single vehicles as well as train sets. Adjacent to the maintenance tracks would be the support shops, parts storeroom, and a supervisor's office. A separate MOW vehicle storage facility would also be provided, featuring two-exterior storage tracks, with a covered canopy for storing rail-bound and hi-rail vehicles.

For yard electrification, a traction power substation (TPSS) would be provided with the necessary switch gear and control equipment. The TPSS would be accessible to road vehicles for installation, repair, maintenance, and emergency needs.

The MSF expansion would not be required as part of the first phase of project implementation based on anticipated LRV fleet demand. To accommodate the additional trains needed to provide service to either the Wilshire/Fairfax Station or Wilshire/La Brea Station, an additional four storage tracks, which could store up to 12 trains, would be added within the existing Division 16 site.

FIGURE 2-34. KNE MSF SITE CONCEPTUAL LAYOUT

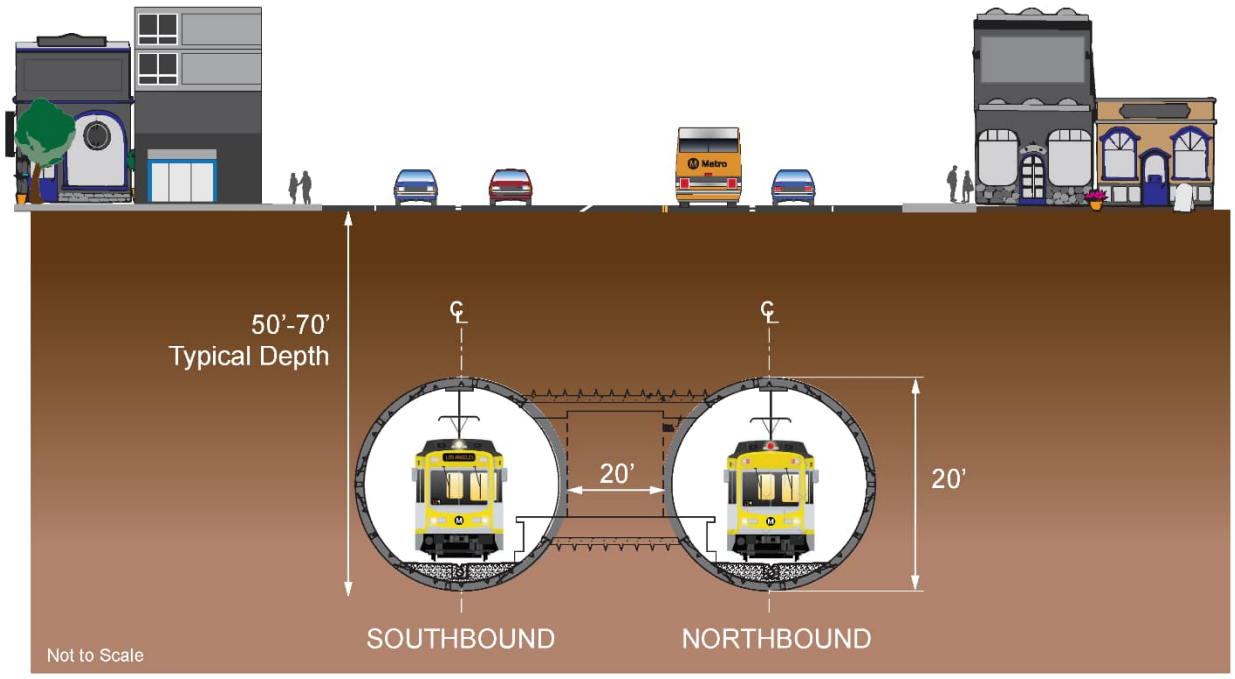


Source: Connect Los Angeles Partners 2024

2.4.4 TUNNEL AND SYSTEM COMPONENTS

The alignment between stations would consist of two side-by-side bored tunnels. Each tunnel would be approximately 20 feet in diameter with 20 feet between the tunnels (Figure 2-35). Between stations, tunnels would generally be 50 to 70 feet below the surface, although they may be deeper or shallower in some locations. Train speed limits along underground LRT tracks are determined by curves in the alignment and the capabilities of the trains. Appendix 2-B, Advanced Conceptual Engineering Drawings, includes tunnel alignment drawings, including tunnel depths.

FIGURE 2-35. TYPICAL TUNNEL CROSS-SECTION



Source: Connect Los Angeles Partners 2022

In addition to the proposed MSF, the alignments would require a number of additional components to support LRV operations, including but not limited to overhead contact system (OCS), tail tracks, crossovers, cross passages, ventilation structures, TPSSs, radio communications, and emergency back-up power generators. Maintenance activities would be performed along the alignments and at stations to maintain these system components.

OVERHEAD CONTACT SYSTEM

The OCS is the overhead system that delivers power to LRT trains. Trains are fitted with pantographs that maintain continuous contact with the wires or rails as the train moves along the tracks. In tunnels, overhead contact rail would be used.

TAIL TRACKS

Tail tracks are stub-end tracks located beyond a terminal station, allowing trains to exit the platform area or move to the other track. They are used to store trains and provide safe braking distances for trains entering the station.

CROSSOVERS

Crossovers are mechanical track installations along a double-track alignment that allow trains traveling in either direction on either track to move to the other track and continue traveling in the same direction without stopping. Trains may also pass through a crossover without switching tracks. Crossovers allow a

portion of one track to be closed without completely suspending rail service. Crossovers can be used to allow trains to bypass a stalled train or turn back in the opposite direction. For this project, crossovers are located adjacent to station platforms.

CROSS PASSAGES

A cross passage is a passageway built to allow access between two parallel tunnels for maintenance and/or emergency purposes. Cross passages would be constructed along the alignment and would be built after the TBM has completed work on the train tunnels and would involve excavation between the twin tunnels.

VENTILATION STRUCTURES

Ventilation structures (fan plants) allow for climate control and emergency ventilation of tunnels and underground stations. These structures would be included at each of the proposed underground stations and adjacent track crossover structures. Station ventilation structures would be located in the public ROW and are often separated from the emergency exits. The ventilation structures would either be at the ground level or sidewalk level and can be incorporated into a future building. These ventilation structures and emergency exits may be located on portions of some of the construction sites identified.

TRACTION POWER SUBSTATIONS

TPSSs are facilities adjacent to the LRT alignment that supply power to the OCS. A TPSS can be up to approximately 5,000 square feet in size. The TPSSs would be located underground in ancillary rooms at the stations.

RADIO COMMUNICATIONS

Radio antenna systems are crucial components for the operations of rail systems, allowing voice transmission between rail yards, maintenance facilities, rail line stations, and passenger vehicles. Radio equipment configured as primary and standby sites aboveground and underground would provide location diversity, signal coverage, and resiliency to failure. The radio subsystem would provide two-way radio communications over channels in the 160 MHz band for Rail Operations and Maintenance, and channels in the 450/460 MHz band for transit police. Other bands may be required for different jurisdictions outside the City of Los Angeles. Every station would have adequate radio coverage and radio equipment compatible with the existing system, per Metro Rail Design Criteria. Radio towers located in station areas are anticipated to be approximately 50 feet tall.

EMERGENCY BACK-UP POWER GENERATORS

Emergency back-up power allows stations, rail yards, and passenger vehicles to continue operations during emergencies or power outages. All stations would be equipped with an external, self-starting, permanently mounted generator that can provide a minimum of four hours of back-up power to the station. Portable and standby generator output voltage should be 480V, three-phase, and connected to the entire station distribution system by a power receptacle or electrical outlet. All generators would also meet the requirements of the Southern California Air Quality Management District and the Environmental Protection Agency.

2.4.5 CONSTRUCTION APPROACH

This section provides an overview of the types of construction activities that would be required to construct each of the alignments and stations, design option, and MSF. Construction of KNE would use similar construction methods as recently built Metro projects, such as the D Line Extension. Stations would primarily be constructed by cut-and-cover method, and tunnels would be bored in between stations using TBMs. A detailed description of project construction activities is provided in Appendix 2-C, Construction Approach Report.

Construction activities for KNE would involve the following:

- Survey, preconstruction, and site preparation, including limited excavation and ROW acquisition
- Tunnel construction, including soft ground TBM excavation and segmental lining installation
- Underground utility support and relocation
- Station, crossover, and connection box construction for the alignments by cut-and-cover
- MSF construction
- Street/site restorations, including paving and sidewalks
- Ventilation and emergency egress construction with vertical shafts
- Systems and facilities installation, including installation of trackbed, rails, OCS (traction power); conduits for systems installations; electrical substations; and communications and signaling
- Systems testing and pre-revenue operations

In addition, the Hollywood Bowl Design Option would require the following:

- Hard rock tunnel and cavern excavations by conventional mining using roadheaders and occasional controlled blasting
- The station, crossover, and tunnel for the Hollywood Bowl Design Option would be constructed by SEM
- Shaft and cut-and-cover excavations in rocks

A generalized sequence of construction activities for the project is presented in Table 2-3. The time necessary for each activity would vary depending on such factors as the nature of the subsurface conditions encountered at station sites and during tunneling, work hours and traffic restrictions, and the contractor's means and methods. Other factors would include the number and type of utilities requiring relocation and the location and condition of nearby surface and subsurface structures.

It is anticipated that several construction activities identified would occur simultaneously along each construction section, accommodating activities requiring lengthy construction times such as utility relocation, tunnels, and station construction. Simultaneous construction may also reduce the overall construction duration. Working hours of construction would vary to meet the type of work being performed and to meet local ordinance restrictions. Nighttime and weekend construction may be required to offset potential effects on the commute period and traffic congestion, and to accommodate construction scheduling for specific work activities.

TABLE 2-3. GENERALIZED SEQUENCE OF CONSTRUCTION ACTIVITIES

ACTIVITY	DESCRIPTION	TYPICAL DURATION (MONTHS)
Survey and preconstruction	Locate utilities; establish ROW and project control points and centerlines; and establish/relocate survey monuments	24 to 36
Site preparation	Relocate utilities and clear ROW (demolition); widen streets at station sites to improve traffic flow during construction; establish detours and haul routes; erect safety devices and mobilize special construction equipment; prepare construction equipment yards and stockpile materials	12 to 24
Heavy construction	Construction of stations and entrances, tunnels, and associated structures; major systems facilities; disposal of excess material; backfilling of stations and portal; and refinishing roadways and sidewalks	72 to 84
Medium construction	Lay track, construct surface facilities (including aboveground structures), drainage, and backfill, and reinstate streets	42 to 54
Light construction	Install all system elements (electrical, mechanical, signals, and communication), traffic signals, street lighting, landscaping, signing, and striping; close detours; clean-up and test system	6 to 18
System integration, testing, and pre-revenue service	Test power, communications, signaling, and ventilation systems; train operators and maintenance personnel	24 to 30

Source: Connect Los Angeles Partners 2024
Note: Construction activities would overlap and the total construction duration would be shorter.
ROW = right-of-way

All work would conform to industry specifications and standards and Metro Rail Design Criteria. Project construction equipment could include the following:

- TBMs
- Haul trucks
- Concrete trucks
- Dozers
- Excavators
- Roadheaders
- Conveyor belts
- Locomotors and rail cars
- Cranes
- Drilling rigs and jumbos
- Flatbeds
- Rock crushers

2.4.5.1 CONSTRUCTION STAGING AREAS

Construction activities would typically be located within the public ROW or on private properties that would be acquired for project components. Construction staging and laydown areas would also be necessary for utility relocations, tunnel construction, and station and ancillary facility construction. Construction staging areas are needed for the following:

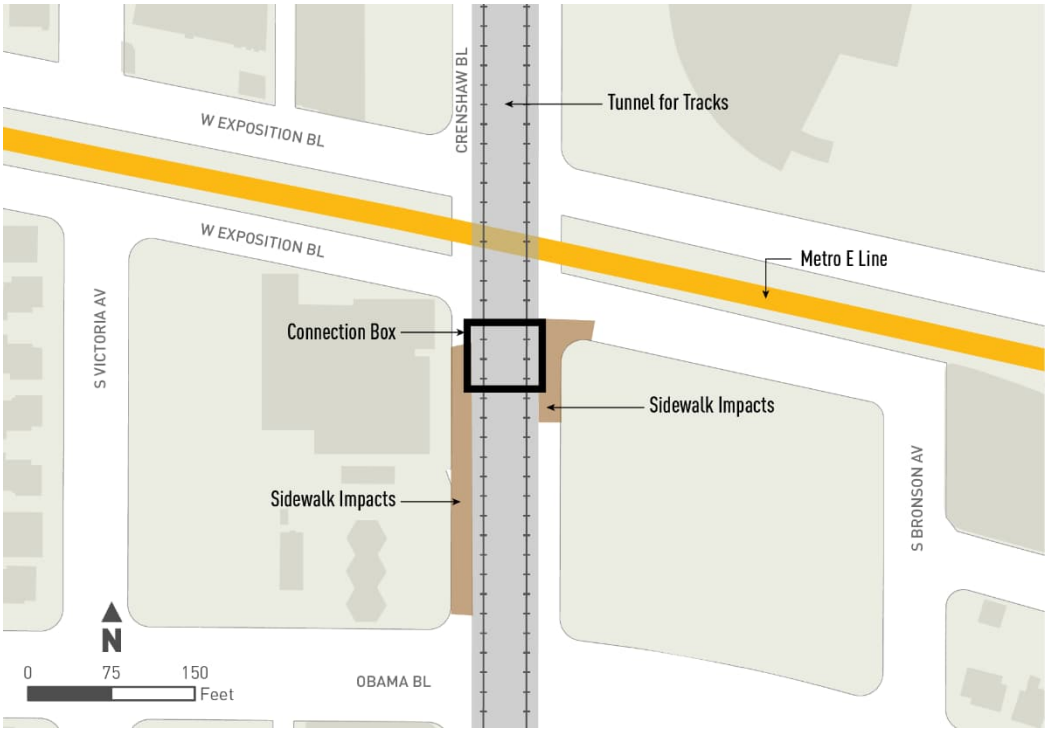
- Equipment storage
- Construction materials delivery
- Equipment assembly
- Materials production

- Dewatering activities
- Access roads
- Temporary trailer offices
- Demolition staging
- Spoils removal
- Other related activities during the construction period

In order to construct a station, a minimum of one to two acres of construction staging area would be needed for the duration of the station construction period. A larger construction staging site of three to four acres would be required if the site is also used to launch the TBMs and support tunneling activities. Construction staging areas would be temporary and would be located within the public ROW and in off-street locations on private properties. Off-street space would be needed for setup, insertion, operation, and extraction of equipment and materials to the tunnel and station excavations. In some instances, land acquired for permanent project facilities, such as station entrances, would be suitable for construction staging. In other locations, temporary construction easements may be needed to allow construction equipment to use private properties during construction. Temporary street closures would be required to accommodate construction staging. Detours and closures would be coordinated with the City of Los Angeles Department of Transportation and the City of West Hollywood. All potential construction staging areas are identified in the station plans (Figure 2-10 through Figure 2-32).

In order to allow a connection between the existing Metro K Line and KNE as well as TBM extraction, a connection box would be constructed. The connection box, as seen in Figure 2-36, is a cut-and-cover box structure at the site identified for connecting the new guideway tunnels to the existing K Line Expo/Crenshaw Station. It would be located within the public ROW on Crenshaw Avenue, approximately 90 feet south of the intersection of Exposition Boulevard and Crenshaw Avenue. The at-grade tracks for the Metro E Line are also located at this intersection along Exposition Boulevard. The connection box excavation footprint would measure approximately 67.5 feet wide by 60 feet long, with a total area of 4,050 square feet. In addition to being used to connect the K Line to KNE, the connection box would also be used to extract TBMs once tunneling was completed.

FIGURE 2-36. CONNECTION BOX EXCAVATION FOOTPRINT AT EXPO/CRENSHAW STATION



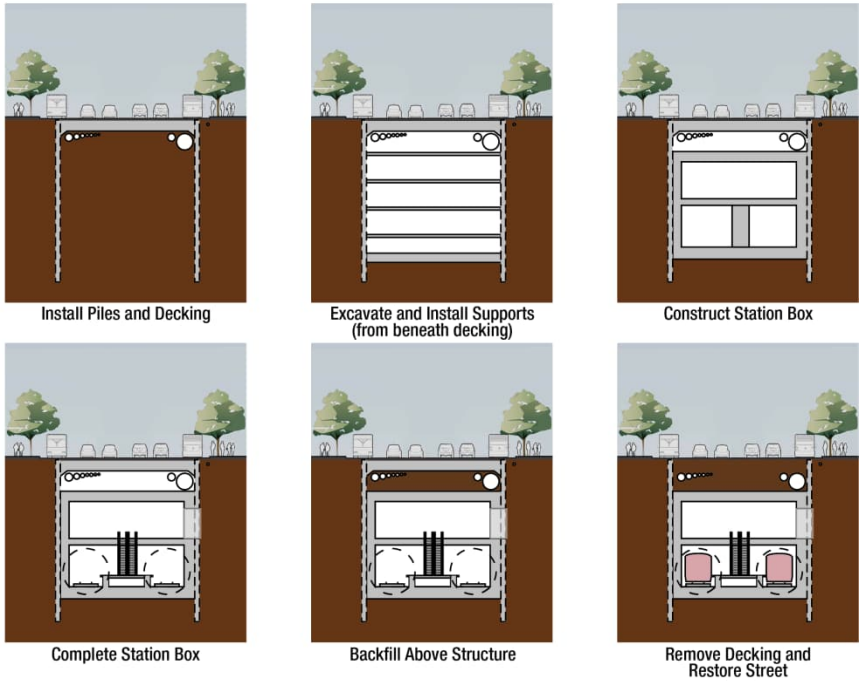
Source: Connect Los Angeles Partners 2024

2.4.5.2 STATION AND CROSSOVER CONSTRUCTION

Most stations and crossovers would be constructed using the cut-and-cover method. Cut-and-cover construction entails excavating down from the ground surface (Figure 2-37). A temporary excavation support is provided to stabilize the ground before excavation commences, and excavation is carried out inside the supported area. A temporary decking structure can be placed over the cut immediately following the first lift of excavation (at about eight to 10 feet below ground surface) to allow for cars to travel on the surface. Once the deck is in place, further excavation and internal bracing would continue to the required depth. Once the station or crossover construction is completed, the area is backfilled and the surface is restored. Support of the excavation system could include soldier piles with lagging, secant piles, cement deep soil mixing walls, and slurry walls.

The Hollywood Bowl Design Option could be constructed via SEM, which entails conventional mining techniques and equipment for hard rock excavation. Generally, roadheaders would be used for the excavations. Controlled blasting would be used for locally encountered, extremely strong rocks. In addition, the crossovers at the Hollywood Bowl Station could be constructed in SEM caverns as ground conditions allow. Application of SEM results in less surface interruption than the cut-and-cover method since the excavation is performed underground and accessed via a vertical shaft. The excavation and the initial ground support are incrementally performed in small areas and in appropriate cycles in order to control ground movements. In certain ground conditions, pre-support systems may be required in advance beyond the opening prior to the excavation. Cross passages would also be constructed via SEM.

FIGURE 2-37. TYPICAL CUT-AND-COVER CONSTRUCTION SEQUENCE



Source: Metro 2012

2.4.5.3 TUNNEL CONSTRUCTION

Guideway tunnels would be constructed using TBMs that continuously bore circular tunnels. Additional details about the tunneling approach are provided in Appendix 2-C, Construction Approach Report. The excavated materials would be removed through the tunnel using conveyor belts to transport them to the surface, then they would undergo partial treatment, separation, and/or drying processes before being loaded on trucks for off-site disposal. As the machine advances, both the tunnel face and the exposed ground are continually supported by the pressurized face and shield until the precast concrete segmental tunnel linings are grouted in to support the ground. This method creates a tunnel with little or no disruption at the surface, especially for tunneling at greater depths. Similar to other tunnel projects in the Los Angeles area, pressurized face TBMs would be used for KNE.

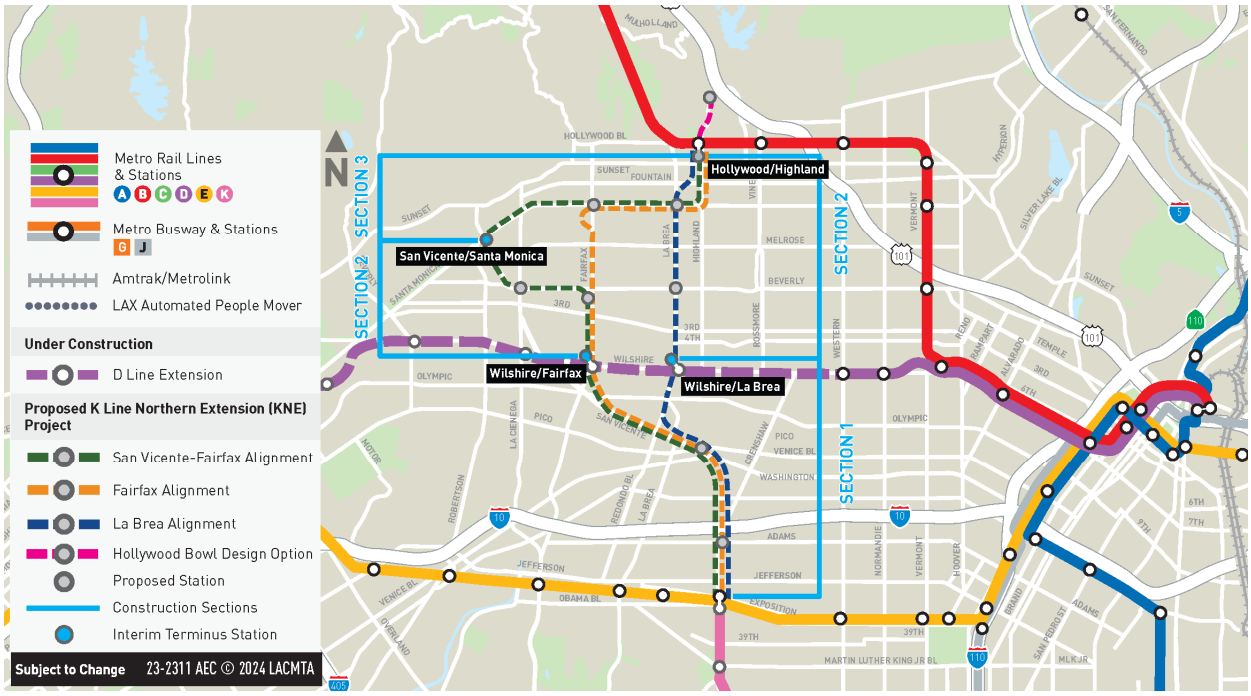
For the Hollywood Bowl Design Option, two distinct modes of TBMs would be required for hard rock and soft grounds. The soft ground TBM mode would be used for the majority of KNE south of the Hollywood fault (located near Franklin Avenue). In the area north of the Hollywood fault where hard rock conditions would be encountered, a conventional tunneling method would be used with roadheaders and localized controlled blast. As an alternative, a hard rock TBM mode would be used for the limited tunnel reach north of the Hollywood fault. The TBM that would excavate across the Hollywood fault would have to either be modified from one mode to the other mode or equipped to perform in both modes.

KNE would generally consist of twin tunnels with approximately 20 feet of inside diameter, bored side-by-side and separated by a pillar of ground about 20 feet wide in between. Bore tunnel excavation generally would range from four to six months for the typical one-mile length between stations, but would vary depending on the ground conditions encountered, site and work area constraints, length of tunnel, and the number of TBMs used. The two TBMs would be launched in the same direction with a staggered start whereby the second TBM would be launched approximately one month after the first TBM launches. The conventionally mined tunnel sections in the Hollywood Bowl segment would be of similar size except for an enlarged section to accommodate potential fault rupture offset[1] and the TBM walkthrough.

2.4.6 CONSTRUCTION SECTIONS

KNE would be constructed in either two or three sections depending on the selected alignment (Figure 2-38). For all alignments, the first section would connect the E Line to the D Line.

FIGURE 2-38. KNE CONSTRUCTION SECTIONS



Source: Connect Los Angeles Partners 2024
Note: The Hollywood Bowl Design Option would be included in Section 3 of the KNE San Vicente–Fairfax Alignment or Section 2 of the KNE Fairfax Alignment and La Brea Alignment.

[1]Because the Hollywood Bowl tunnel segment would cross the Hollywood fault, a potential fault-rupture displacement could occur during construction and operation. Large-sized tunnel sections would be constructed for a certain distance over the fault crossing to withstand seismic loads so that the tracks could be inspected, realigned, and reinstated after a seismic event.

The KNE San Vicente–Fairfax Alignment would be constructed in three sections. Section 1 would extend from the Expo/Crenshaw Station to the Wilshire/Fairfax Station; Section 2 would extend from the Wilshire/Fairfax Station to the San Vicente/Santa Monica Station; and Section 3 would extend from the San Vicente/Santa Monica Station to the northern terminus at either the Hollywood/Highland Station or the optional Hollywood Bowl Station.

The KNE Fairfax Alignment would be constructed in two sections. Section 1 would extend from the Expo/Crenshaw Station to the Wilshire/Fairfax Station; Section 2 would extend from the Wilshire/Fairfax Station to the northern terminus at either the Hollywood/Highland Station or the optional Hollywood Bowl Station.

The KNE La Brea Alignment would be constructed in two sections. Section 1 would extend from the Expo/Crenshaw Station to the Wilshire/La Brea Station; Section 2 would extend from the Wilshire/La Brea Station to the northern terminus at either the Hollywood/Highland Station or the optional Hollywood Bowl Station.

This Draft EIR assumes the sections would be built sequentially, with each construction section taking approximately eight to 12 years to construct depending on their length and complexity. Construction activities for one section, such as site preparation and tunnel and station construction, were assumed to not overlap between sections. Each section would be constructed before the next section begins construction. Table 2-4 provides a summary of each construction section, including the TBM launch and retrieval sites.

TABLE 2-4. CONSTRUCTION DURATIONS AND LOCATIONS BY SECTION

CONSTRUCTION SECTION	SECTION EXTENTS	MILES/ NUMBER OF STATIONS	APPROXIMATE TOTAL CONSTRUCTION DURATION	TBM LAUNCH SITE	TBM RETRIEVAL SITE
San Vicente–Fairfax Section 1	Expo/Crenshaw Station to Wilshire/Fairfax Station	3.9 miles/ 3 stations	10 to 12 years	Midtown Crossing Station	Northbound: Wilshire/Fairfax Station Southbound: Expo/Crenshaw Station
San Vicente–Fairfax Section 2	Wilshire/Fairfax Station to San Vicente/Santa Monica Station	2.6 miles/ 3 stations	10 to 12 years	San Vicente/Santa Monica Station	Southbound Only: Wilshire/Fairfax Station
San Vicente–Fairfax Section 3	San Vicente/Santa Monica Station to Hollywood/Highland Station	3.2 miles/ 3 stations	9 to 10 years	La Brea/Santa Monica Station	Northbound: Hollywood/Highland Station Southbound: San Vicente/Santa Monica Station
	San Vicente/Santa Monica Station to Hollywood Bowl Station	4.0 miles/ 4 stations	10 to 11 years	La Brea/Santa Monica Station	Northbound: Hollywood Bowl Station Southbound: San Vicente/Santa Monica Station
Fairfax Section 1	Expo/Crenshaw Station to Wilshire/Fairfax Station	3.9 miles/ 3 stations	10 to 12 years	Midtown Crossing Station	Northbound: Wilshire/Fairfax Station Southbound: Expo/Crenshaw Station
Fairfax Section 2	Wilshire/Fairfax Station to Hollywood/Highland Station	3.9 miles/ 4 stations	9 to 10 years	La Brea/Santa Monica Station	Northbound: Hollywood/Highland Station Southbound: Wilshire/Fairfax Station
	Wilshire/Fairfax Station to Hollywood Bowl Station	4.7 miles/ 4 stations	10 to 11 years	La Brea/Santa Monica Station	Northbound: Hollywood Bowl Station Southbound: Wilshire/Fairfax Station
La Brea Section 1	Expo/Crenshaw Station to Wilshire/La Brea Station	3.4 miles/ 3 stations	10 to 11 years	Midtown Crossing Station	Northbound: Wilshire/La Brea Station Southbound: Expo/Crenshaw Station
La Brea Section 2	Wilshire/La Brea Station to Hollywood/Highland Station	2.8 miles/ 3 stations	8 to 10 years	La Brea/Santa Monica Station	Northbound: Hollywood/Highland Station Southbound: Wilshire/La Brea Station
	Wilshire/La Brea Station to Hollywood Bowl Station	3.6 miles/ 4 stations	10 to 11 years	La Brea/Santa Monica Station	Northbound: Hollywood Bowl Station Southbound: Wilshire/La Brea Station
MSF	Expansion of Division 16	N/A	4 to 5 years*	N/A	N/A

Source: Connect Los Angeles Partners 2024
*MSF construction would overlap with Section 2 construction activities for all three alignments.
Note: Section 1 of the San Vicente–Fairfax Alignment and Fairfax Alignment would be identical in length, number of stations, and northern and southern extents. Due to the alignment length, the San Vicente–Fairfax Alignment would be constructed in three sections.
MSF = maintenance and storage facility; N/A = not applicable; TBM = tunnel boring machine

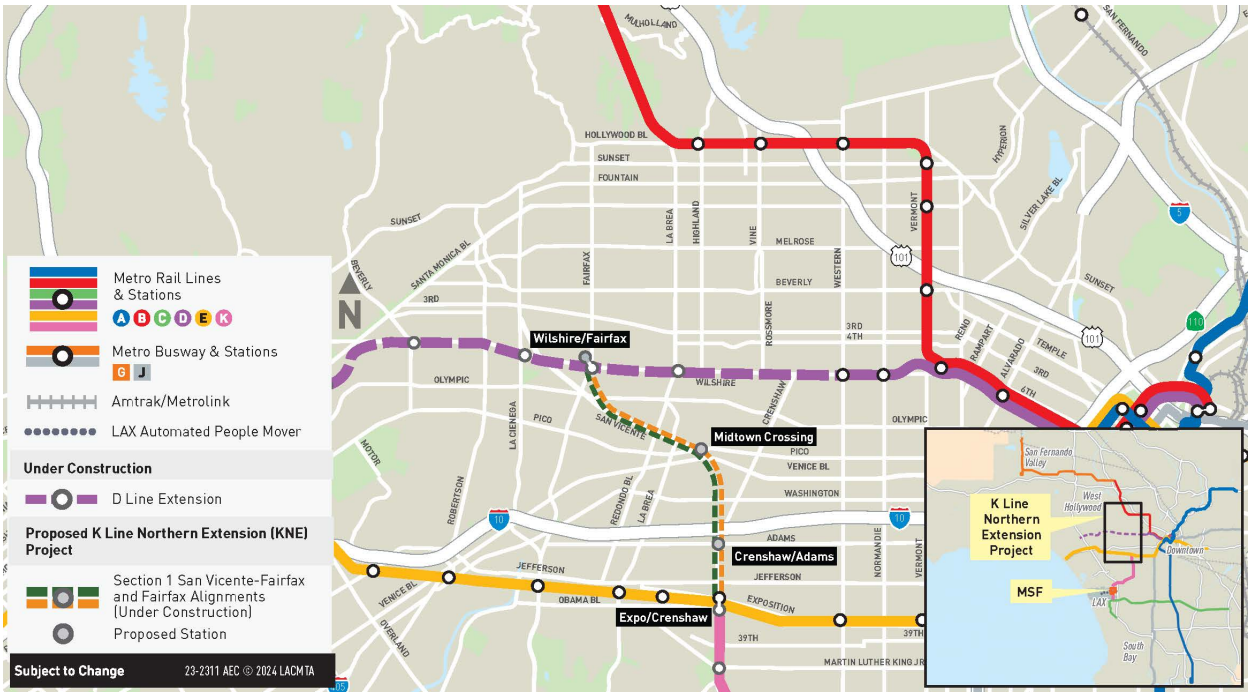
KNE SAN VICENTE–FAIRFAX ALIGNMENT

The KNE San Vicente–Fairfax Alignment would be constructed sequentially in three sections. Section 1 of the San Vicente–Fairfax Alignment would extend from the current Metro K Line terminus at the Expo/Crenshaw Station to the proposed Wilshire/Fairfax Station, providing a connection to the D Line (Figure 2-39). Two TBMs would be launched from the Midtown Crossing Station and would bore toward the south first, then would be extracted north of the Expo/Crenshaw Station. The TBMs would then be transferred to the Midtown Crossing Station via surface streets, re-launched to the north, and extracted at the Wilshire/Fairfax Station.

Section 2 would extend from the Section 1 terminus at Wilshire/Fairfax Station to the proposed San Vicente/Santa Monica Station in West Hollywood (Figure 2-40). Two TBMs would be launched from the San Vicente/Santa Monica Station and would bore toward the south, then would be extracted at the Wilshire/Fairfax Station.

Section 3 would extend from the Section 2 terminus at San Vicente/Santa Monica Station to the northern terminus at Hollywood/Highland Station or the Hollywood Bowl Station (Figure 2-41). Two TBMs would be launched from the La Brea/Santa Monica Station and would bore toward the south first, then would be extracted at the San Vicente/Santa Monica Station. The TBMs would then be transferred to the La Brea/Santa Monica Station via surface streets, re-launched to the north, and extracted at either the Hollywood/Highland Station or at the optional Hollywood Bowl Station. If the Hollywood Bowl Station is constructed, the SEM technique would be used to excavate the tunnels north of the Hollywood fault due to different geologic conditions in this area. The TBM would then be walked through the new SEM tunnel and removed via the emergency ventilation/egress shaft at the Hollywood Bowl Station.

FIGURE 2-39. KNE SAN VICENTE–FAIRFAX AND FAIRFAX ALIGNMENTS – SECTION 1



Source: Connect Los Angeles Partners 2024

FIGURE 2-40. KNE SAN VICENTE–FAIRFAX ALIGNMENT – SECTION 2

Source: Connect Los Angeles Partners 2024

FIGURE 2-41. KNE SAN VICENTE–FAIRFAX ALIGNMENT – SECTION 3

Source: Connect Los Angeles Partners 2024

KNE FAIRFAX ALIGNMENT

The KNE Fairfax Alignment would be constructed sequentially in two sections. Identical to the KNE San Vicente–Fairfax Alignment, Section 1 of the Fairfax Alignment would extend from the current Metro K Line terminus at the Expo/Crenshaw Station to the proposed Wilshire/Fairfax Station, providing a connection to the D Line (Figure 2-39). Two TBMs would be launched from the Midtown Crossing Station and would bore toward the south first, then would be extracted north of the Expo/Crenshaw Station. The TBMs would then be transferred to the Midtown Crossing Station via surface streets, re-launched to the north, and extracted at the Wilshire/Fairfax Station.

Section 2 would extend from the Section 1 terminus at Wilshire/Fairfax Station to the northern terminus at Hollywood/Highland or the Hollywood Bowl (Figure 2-42). Two TBMs would be launched from the La Brea/Santa Monica Station and would bore toward the south first, then would be extracted at the Wilshire/Fairfax Station. The TBMs would then be transferred to the La Brea/Santa Monica Station via surface streets, re-launched to the north, and extracted at either the Hollywood/Highland Station or the optional Hollywood Bowl Station. If the Hollywood Bowl Station is constructed, the SEM technique would be used to excavate the tunnels north of the Hollywood fault due to different geologic conditions in this area. The TBM would then be walked through the new SEM tunnel and removed via the emergency ventilation/egress shaft at the Hollywood Bowl Station.

FIGURE 2-42. KNE FAIRFAX ALIGNMENT – SECTION 2

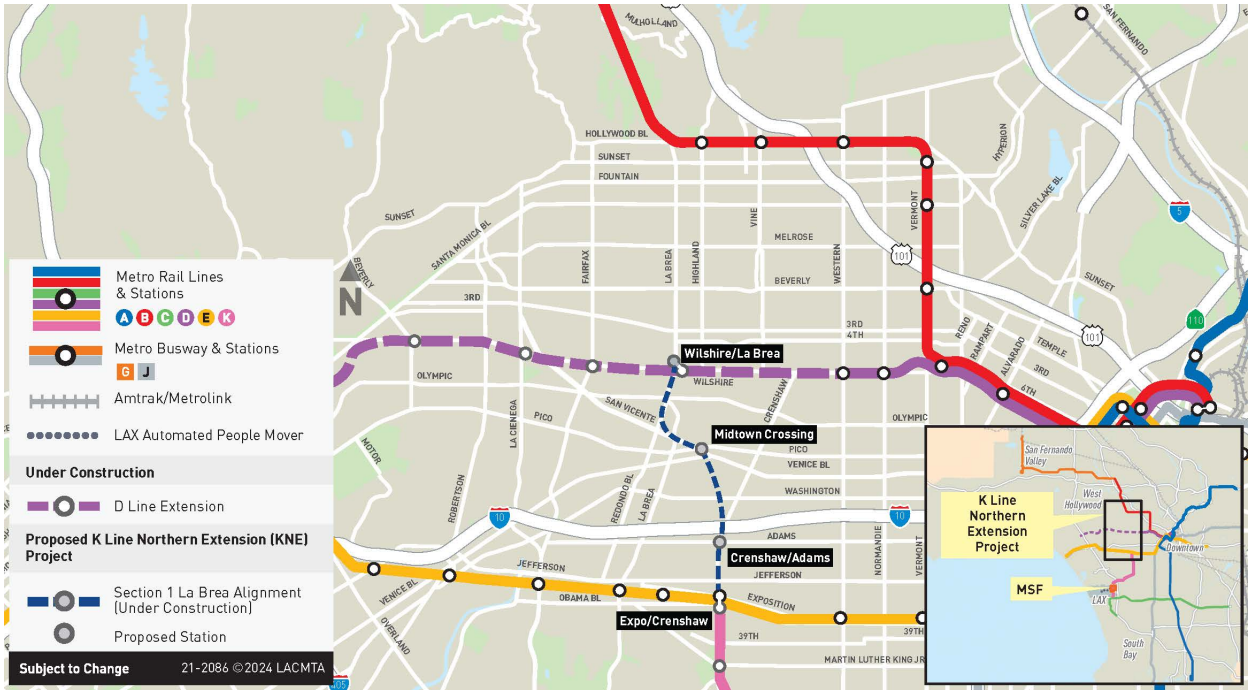
Source: Connect Los Angeles Partners 2024

KNE LA BREA ALIGNMENT

The KNE La Brea Alignment would be constructed sequentially in two sections. Section 1 of the La Brea Alignment would extend from the current Metro K Line terminus at Expo/Crenshaw to the proposed Wilshire/La Brea Station, providing a connection to the D Line (Figure 2-43). Two TBMs would be launched from the Midtown Crossing Station and would bore toward the south first, then would be extracted north of the Expo/Crenshaw Station. The TBMs would then be transferred to the Midtown Crossing Station via surface streets, re-launched to the north, and extracted at the Wilshire/La Brea Station.

Section 2 would extend from the Section 1 terminus at the Wilshire/La Brea Station to the northern terminus at the Hollywood/Highland Station or the Hollywood Bowl Station (Figure 2-44). Two TBMs would be launched from the La Brea/Santa Monica Station and would bore toward the south first, then would be extracted at the Wilshire/La Brea Station. The TBMs would then be transferred to the La Brea/Santa Monica Station via surface streets, re-launched to the north, and extracted at either the Hollywood/Highland Station or the optional Hollywood Bowl Station. If the Hollywood Bowl Station is constructed, the SEM technique would be used to excavate the tunnels north of the Hollywood fault due to different geologic conditions in this area. The TBM would then be walked through the new SEM tunnel and removed via the emergency ventilation/egress shaft at the Hollywood Bowl Station.

FIGURE 2-43. KNE LA BREA ALIGNMENT – SECTION 1



Source: Connect Los Angeles Partners 2024

FIGURE 2-44. KNE LA BREA ALIGNMENT – SECTION 2

Source: Connect Los Angeles Partners 2024

2.4.7 OPERATING HOURS AND FREQUENCY

The operating hours and schedule assumptions for the project were developed based on typical Metro LRT operating characteristics. The alignments would operate approximately 21 hours a day, seven days per week, from about 4:00 a.m. to 1:00 a.m.; three-car trains would operate during all time periods.

The proposed frequency of service (headways) would range from five minutes during peak periods to up to 20 minutes during off-peak periods. The operating hours and schedule would be finalized closer to the opening of the project.

2.5 PERMITS AND APPROVALS

KNE would require various environmental permits and/or approvals, as summarized in Table 2-5.

TABLE 2-5. PERMITS AND APPROVALS FOR KNE

AGENCY	AGENCY/JURISDICTION	PERMIT/APPROVAL REQUIRED	ANTICIPATED PHASE
Federal Agencies	N/A	N/A	N/A
State Agencies	State Water Resources Control Board	National Pollutant Discharge Elimination System General Permit	Final Design; Construction Phase
		Industrial General Permit	Final Design; Construction Phase; Operations
		Construction General Permit	Construction Phase
		Municipal Separate Storm Sewer System (MS4)	Final Design; Operations
	California Department of Transportation	Permits and approvals for encroachment on Caltrans facilities	Final Design; Construction Phase
	California Division of Occupational Safety and Health	Essential Welding or Cutting Activities Permit	Prior to Construction Phase; Construction Phase
	California Department of Transportation	Approval of Traffic Management Plan	Environmental Phase; Prior to Construction Phase
	California Public Utilities Commission	Approval of emergency egress and walkways	Final Design; Construction Phase
Regional Jurisdictions	Los Angeles County Metropolitan Transportation Authority Board of Directors	Certification of the EIR, adoption of Findings and Statement of Overriding Considerations, adoption of the Mitigation Monitoring and Reporting Program as Lead Agency under CEQA	End of Environmental Phase
	Los Angeles Regional Water Quality Control Board	Dewatering Permit	Final Design; Construction Phase
		Municipal National Pollutant Discharge Elimination System Permit	Final Design; Construction Phase
		Waste Discharge Requirements (Section 403 and 408 permits not expected to be required)	Final Design; Construction Phase

AGENCY	AGENCY/JURISDICTION	PERMIT/APPROVAL REQUIRED	ANTICIPATED PHASE
Local Jurisdictions	City of Los Angeles	Permits and/or discretionary actions	Environmental Phase; prior to Construction Phase
	Los Angeles Department of Transportation	Permits and/or discretionary actions	Environmental Phase; prior to Construction Phase
	Los Angeles Department of Water and Power	Approval of utilities relocation or service interruption	Final Design; Construction Phase
	City of Los Angeles Board of Public Works	Permit for Alterations to Protected Trees (Trimming, Relocation, Removing)	Final Design; Construction Phase
	City of West Hollywood	Permit for Planting, Trimming or Removing Shade or Ornamental Tree, Hedge, Plant, Shrub, or Flower Growing, or Planted to Grow	Final Design; Construction Phase
	Los Angeles Department of Building and Safety	Permit for Earthwork and Grading Activities	Construction Phase
	City of West Hollywood	Grading Permit	Construction Phase
	City of West Hollywood	Section 9.08.0560 Noise Permit	Environmental Phase; Final Design; Prior to Construction Phase; Construction Phase
	City of Los Angeles	Noise Sensitive Use Permit	Prior to Construction Phase; Final Design; Construction Phase
	Los Angeles County Metropolitan Transit Authority	Approval of Noise and Vibration Monitoring and Control	Prior to Construction Phase
	City of Los Angeles	Demolition Notification Ordinance and Permit for Demolition of Historical and Cultural Buildings	Environmental Phase; prior to Construction Phase
	City of Los Angeles	General Construction Permit	Environmental Phase; prior to Construction Phase
	City of West Hollywood	General Construction Permit	Environmental Phase; prior to Construction Phase
	City of Los Angeles	Approval of Traffic Management Plan	Environmental Phase; prior to Construction Phase
	City of West Hollywood	Approval of Traffic Management Plan	Environmental Phase; prior to Construction Phase
	City of Inglewood	Approval of Traffic Management Plan	Environmental Phase; prior to Construction Phase

Source: Connect Los Angeles Partners 2024
CEQA = California Environmental Quality Act; EIR = environmental impact report; MS4 = municipal separate storm sewer system; N/A = not applicable

CHAPTER 3 ENVIRONMENTAL ANALYSIS

3.1 INTRODUCTION

3.1.1 ORGANIZATION OF CHAPTER 3

This section provides an overview of the organization and content of the environmental analysis for the K Line Northern Extension (KNE) project.

Sections 3.2 through 3.19 of Chapter 3 discuss the environmental impacts as defined under the California Environmental Quality Act (CEQA) that may result from implementation of KNE, as well as proposed mitigation measures that would reduce significant impacts to less than significant levels to the extent feasible. Significant impacts that cannot be reduced to a less than significant level with mitigation are identified as significant and unavoidable impacts of the project.

Chapter 3 includes evaluation of the following environmental resources:

- Section 3.2, Aesthetics
- Section 3.3, Air Quality
- Section 3.4, Biological Resources
- Section 3.5, Communities, Population and Housing
- Section 3.6, Cultural and Paleontological Resources
- Section 3.7, Energy
- Section 3.8, Geology and Soils
- Section 3.9, Greenhouse Gas Emissions
- Section 3.10, Growth Inducing Impacts
- Section 3.11, Hazards and Hazardous Materials
- Section 3.12, Hydrology and Water Quality
- Section 3.13, Land Use and Planning
- Section 3.14, Noise and Vibration
- Section 3.15, Public Services and Recreation
- Section 3.16, Transportation
- Section 3.17, Tribal Cultural Resources
- Section 3.18, Utilities and Service Systems
- Section 3.19, Cumulative Impacts

3.1.2 CHAPTER 3 FORMAT AND CONTENT

For the environmental resources where it was determined that no impact would occur (i.e., Agriculture and Forestry Resources and Wildfire), a brief evaluation of the impact determination is provided in Chapter 4, Other CEQA Required Topics. For each resource evaluated in detail in Chapter 3, the format and content are as follows:

- **Regulatory Framework:** This section provides an overview of the relevant federal, state, regional, and local laws and regulations that apply to the project.
- **Methodology:** This section describes the methods and tools that were used to assess existing conditions and identify how potential impacts for each resource were determined.
  - **Significance Thresholds:** This section lists the CEQA thresholds used to determine the significance of each project impact.

- Resource Study Area: This section defines the resource study areas in which all existing conditions investigations and environmental impact assessments are conducted.
- Existing Setting: This section describes the existing conditions for each environmental resource. As per Section 15125(a) of the CEQA Guidelines, the environmental setting is used to establish the baseline physical conditions by which the impacts associated with the project are evaluated. The environmental setting is generally based on the environmental conditions that existed when the Notice of Preparation for the project was published on April 15, 2021, with exceptions as noted in the individual resource analyses.
- Project Measures: This section lists the project measures relevant to the resource that would be implemented as part of all proposed alignments, the design option, and the maintenance and storage facility, where available. Project measures are design features, best management practices, or other commitments that the Los Angeles County Metropolitan Transportation Authority would implement to reduce or avoid environmental effects associated with project construction and operation. See Appendix 3.1-A for a full list of project measures.
- Impact Evaluation and Mitigation Measures: This section provides an evaluation of impacts associated with the project and identifies whether the impacts would exceed relevant thresholds of significance. Impact significance is determined without consideration of mitigation measures, and if mitigation measures are identified as required for significant impacts, impact significance conclusions are also provided following application of mitigation measures.

3.2 AESTHETICS

3.2.1 INTRODUCTION

This discussion provides an evaluation of K Line Northern Extension (KNE) as it relates to aesthetics. It includes descriptions of the federal, state, and local regulatory setting, existing conditions, and the impacts from construction and operation of the proposed alignments and stations, design option, and maintenance and storage facility (MSF), as well as mitigation measures where applicable. For more detailed information, refer to the KNE Aesthetics Technical Report (Appendix 3.2-A).

3.2.2 REGULATORY FRAMEWORK

3.2.2.1 FEDERAL

There are no federal regulations applicable to the project regarding aesthetics. However, the analysis methodology follows the Federal Highway Administration's (FHWA) Guidelines for the Visual Impact Assessment of Highway Projects (FHWA 2015), which is used by the State of California.

3.2.2.2 STATE

The following state laws and regulations are relevant to construction and operation of the project:

- California Environmental Quality Act (CEQA) (Public Resources Code 21000 et seq, and CEQA Guidelines, Section 15000 et seq.)
- California State Scenic Highway Program (California Streets and Highways Code Sections 260 to 263)

3.2.2.3 REGIONAL

The following regional agency has regulations and policies pertaining to aesthetics and visual quality that are relevant to construction and operation of the project:

- Southern California Association of Governments (SCAG) 2020-2045 SCAG Regional Transportation Plan/Sustainable Communities Strategy (SCAG 2020)

3.2.2.4 LOCAL

All Metro rail projects must be designed in accordance with the most recent Metro Rail Design Criteria (MRDC). In addition, the following Metro policies pertain to minimizing aesthetic and visual impacts on the surrounding community:

- Systemwide Station Design Standards Policy
- Metro Art Program Policy
- Signage Standards
- Tree Policy

The following general policy statements related to visual resources are part of the existing Los Angeles County 2035 General Plan, adopted in October 2015 (Los Angeles County 2015):

- Urban Form: Protect and enhance the visual uniqueness of natural edges, encourage superior design of major entryways, and create a consistent visual relationship with surrounding development.
- Community Design: The concept of community design includes, but is not limited to, examples such as consistent landscaping, visual delineation of a special district, or design standards to minimize the visual impact of structures on the environment.
- Scenic Resources: Protect the visual quality of highly scenic areas and views from scenic highways, roads, trails, and key vantage points.
- Historic Resources: Protect the visual integrity of historical sites or structures, including consideration of building heights, materials, textures, colors, setbacks, and landscaping.

The City of Los Angeles and City of West Hollywood have codes, ordinances, and general plans that regulate permitting, design, construction, and operational activities as they pertain to visual and aesthetic resources. These policies generally pertain to urban design, pedestrian amenities, the preservation of building and other structures, street trees and landscaping, and protection of natural viewsheds, whenever possible.

The City of Los Angeles maintains community plans for over 30 Community Plan Areas. The community plans establish a framework of the neighborhood-specific goals and policies that achieve the broad objectives laid out within the city's larger general plan. The following community plans are applicable to aesthetics and visual impacts:

- West Adams – Baldwin Hills – Leimert Community Plan: Policies that pertain to aesthetics and visual resources include urban design, streetscape design, creating distinctive pedestrian areas in commercial districts, and enhancing the overall visual quality and image (City of Los Angeles. 2016).
- Crenshaw Corridor Specific Plan: Policies that pertain to aesthetics and visual resources include urban design, specifically reducing the negative visual impact from loading, storage, and trash areas, directed lighting that is shielded and directed to minimize glare, and streetscaping (City of Los Angeles 2017).
- Wilshire Community Plan: Policies that pertain to aesthetics and visual resources include urban design while enhancing the distinctive community identity and recognizing and promoting the unique character of the neighborhoods within the Community Plan area (City of Los Angeles 2001).

3.2.3 METHODOLOGY

3.2.3.1 CEQA METHODOLOGY

The purpose of this analysis is to evaluate the project against thresholds of significance as the basis for determining the level of impacts related to aesthetics. The methodology for analyzing aesthetics impacts

follows the guidance outlined in FHWA's Guidelines for the Visual Impact Assessment of Highway Projects (FHWA 2015). Despite assessment guidance, it is acknowledged that the findings of an analysis of existing visual or aesthetic resources and visual or aesthetic impacts can be highly subjective, dependent upon the background of the assessor and the opinions of the views. The qualities that create an aesthetically pleasing setting or that result in the perception of a visual element as aesthetically positive or negative vary from person to person. Different viewers may consider a change in the visual environment as either beneficial or adverse.

The following steps were followed to assess the existing visual setting and visual impacts of the project:

- Identify landscape units
- Identify the existing visual resources that could be noticeably obstructed by the project
- Assess the visual impacts associated with the project

FHWA defines landscape units (LU) as the spatially defined landscape with a particular visual identity upon which impacts to visual character, viewers, and visual quality are assessed. A landscape is typically defined by the limits of a particular viewshed[1] or by a distinct transition in land uses—a 0.25-mile radius that includes viewers and visual resources that could be affected temporarily or permanently by the project. The 0.25-mile radius is a standard based on FHWA guidance and considers the position of the viewer in relationship to the landscape. Views representative of the visual character of the area were identified within each LU. Section 3.2.5, Existing Setting, provides descriptions of the landscape units identified within each alignment and station, the Hollywood Bowl Design Option, and the MSF.

Visual resources include items typically found in the natural environment (e.g., land, water, vegetation, animals); the cultural environment (e.g., buildings, infrastructure, structures, iconic artifacts, and art), or the project environment (e.g., roadway geometrics, grading, constructed elements, vegetative cover, ancillary visual elements, and atmospheric conditions). Visual sensitivity to such resources varies with the type of viewer group and the frequency and duration of views (e.g., recreationists at parklands, employees of commercial, industrial and office facilities, commuters).

Visual or aesthetic impacts are determined by assessing the compatibility of the project components (i.e., mass, scale, and light and glare) with the existing surrounding visual character. The viewer groups' sensitivity may include the loss of scenic resources, obstruction of scenic views, and the introduction of new project-related features that may influence the significance, scale, or character of the existing visual environment. With the exception of the station portals and the MSF, because the alignments are primarily underground, the aboveground components are limited in size, shape, and area, and they have been designed to be incorporated into the existing surroundings and, therefore, have less effect on viewer sensitivity.

[1] A viewshed is the surface area visible from a particular location (e.g., an overlook or business) or sequence of locations (e.g., along a roadway or trail).

The extent of visual impacts is determined for each LU, with as much objectivity as is practical given the subjective nature of aesthetic perceptions, by assessing changes to the visual resources (i.e., visual character and visual quality) and predicting viewer response to those changes.

3.2.3.2 SIGNIFICANCE THRESHOLDS

In accordance with Appendix G of the 2022 CEQA Guidelines, the project would have a significant impact related to aesthetics if it would:

- Impact AES-1: Have a substantial adverse effect on a scenic vista.
- Impact AES-2: Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
- Impact AES-3: In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings (public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality.
- Impact AES-4: Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

3.2.4 RESOURCE STUDY AREA

The resource study area (RSA) for aesthetics is limited to the zone of highest visual concern, which is an area with a radius of up to 0.25 mile from the alignments and stations and the design option, as well as visible construction-related activities and staging, and from the MSF. The 0.25-mile radius is standard based on FHWA guidance and considers the position of the viewer in relationship to the landscape. The RSA for this analysis encompasses the existing above ground landscapes within views from public vantage points that would be directly affected, temporarily and/or permanently, by the project's facilities and components during both construction and operation. Specifically, the RSA includes scenic vistas, state scenic highways, visual character, and light and glare.

3.2.5 EXISTING SETTING

This existing setting discussion summarizes current conditions related to aesthetics within and near the KNE RSA.

The immediate vicinity of the RSA was subdivided into a series of LUs to capture the aesthetic and visual characteristics of different segments of the corridor. Because the majority of each proposed alignment is below ground, the LUs have been identified based on the locations of the proposed stations. Station box components such as concourses to access platforms and platforms from which to board trains would be underground, while station entrances, signage, and ventilation structures would be above the surface at street level. Therefore, landscape units focus on the street-level components of the stations, as well as areas where surface construction staging and activities are concentrated around the proposed station locations. Above-surface construction features also include the sidewalk zone of influence. The sidewalk zone of influence includes portions of sidewalks that could be obstructed by station construction, as well

as sidewalk closures, sidewalk detours, and the effects on gutters and curbs, all of which may require reconstruction.

Defining the existing aesthetic and visual setting establishes a baseline of aesthetic and visual resources in an existing location and its surroundings and then considers how the project may change these resources and the overall aesthetic and visual setting. The aesthetic and visual resources include an inventory of scenic vistas, state scenic highways, visual character, and light and glare within each LU. However, there is no clear-cut definition of what constitutes a scenic vista. Generally scenic vistas could be considered visually interesting public views of focal points (e.g., notable objects, buildings, settings) or panoramas that extend into the distance. Relevant planning documents such as general plans, specific plans, and zoning codes provide the most precise definitions. According to the general plans and community plans of the Cities of Los Angeles and West Hollywood, there are no state, county, or locally designated scenic vistas within the RSA. Depending on the publicly accessible location, distant views include the Hollywood Hills to the north-northwest and the San Gabriel Mountains and Hollywood Hills to the north-northeast; however, these vistas are minimally visible throughout the RSA due to the orientation of roadways and the built-out urban landscape (i.e., there are intervening structures, trees and landscaping, and utility poles).

The closest designated state scenic highways and Los Angeles County Officially Designated Scenic Highways are between 10 and 20 miles from the LUs.

Similar to scenic vistas, visual character is subjective, and descriptive rather than analytical, using human elements of form, line, color, and texture of landscape features to assist in developing a clear visual image of the landscape in the reader's mind relative to viewing range of a site and context of locale. For example, the iconic signage and clock tower of the Original Farmers Market (i.e., within LU 4) provides a visual reminder and context of the cultural history of this part of Los Angeles.

Due to the urbanized nature of the project, a high level of ambient nighttime light and daytime glare already exists throughout all LUs. Nighttime lighting sources include streetlights, vehicle headlights, and interior/exterior building illumination, as well as light fixtures on nearby residential, commercial, and industrial uses. Glare is mostly a daytime occurrence and associated with buildings with exterior façades largely or entirely comprised of highly reflective glass or mirror-like materials.

This discussion identifies the existing setting for KNE. Descriptions of each landscape unit for the KNE alignments and stations, the design option, and the MSF are provided below. Figure 3.2-1 and Figure 3.2-2 show the photograph locations representing each landscape unit.

Refer to Figure 2-8 in Chapter 2, Project Description, for a graphic of a typical Metro station entrance.

FIGURE 3.2-1. PHOTO LOCATIONS MAP FOR ALIGNMENTS

Source: Connect Los Angeles Partners 2024
NE = northeast, NW = northwest, SW = southwest

FIGURE 3.2-2. PHOTO LOCATION MAP FOR MSF

Source: Connect Los Angeles Partners 2024
N = north, S = south

3.2.5.1 LANDSCAPE UNIT 1 – CRENSHAW/ADAMS STATION

LU-1 incorporates the intersection of Crenshaw Boulevard and Adams Boulevard and extends north to approximately the I-10 freeway, south to just beyond 29th Street, east to approximately 12th Avenue, and west to approximately Virginia Road. The proposed Crenshaw/Adams Station entrance would be located at one of two locations: on the southwest corner of Crenshaw Boulevard and Adams Boulevard, shown in Figure 3.2-3, or the southeast corner of Crenshaw Boulevard and Adams Boulevard. Depending on the entrance option selected, construction staging areas would either be on the southwest or southeast corner of Adams Boulevard and Crenshaw Boulevard and on the northeast corner of Crenshaw Boulevard and 28th Street. The sidewalk zone of influence at this station would be along both sides of Crenshaw Boulevard between Adams Boulevard and 29th Street, extending onto the corners of the intersections of Adams Boulevard, 28th Street, and 29th Street.

There is a consistent placement of streetlights, crosswalks, and some street trees along Crenshaw Boulevard, south of the intersection of Crenshaw Boulevard and Adams Boulevard. LU-1 is primarily an auto-oriented commercial corridor surrounded by retail, some mixed-use development, and a multistory residential building on the west side of Crenshaw Boulevard at the corner of 28th Street. Retail gas stations dominate the four corners of the Crenshaw Boulevard and Adams Boulevard intersection. There are one- and two-story buildings with surface parking lots along Crenshaw Boulevard.

Primary viewers in LU-1 are people who drive, roll, or walk, including residents, travelers, business patrons, and people who work in the area. Neither Crenshaw Boulevard nor Adams Boulevard have medians in this area, and streetscaping is limited to a few trees and small amounts of landscaping around retail businesses.

Visual resources along this corridor are limited. Although residential areas are within a block of the Crenshaw corridor, neither single-family residences nor multifamily complexes are visible from most of the corridor, with the exception of the multifamily complex at the northwest corner of Crenshaw Boulevard and 28th Street. Background views of the Hollywood Hills and San Gabriel Mountains to the north are limited, except at the intersection, due to urban development and visual perspective.

FIGURE 3.2-3. LU-1, PHOTO #1: CRENSHAW/ADAMS STATION ENTRANCE OPTION 1, SOUTHWEST (EXISTING VIEW, FACING SOUTH)

Source: Connect Los Angeles Partners 2024

3.2.5.2 LANDSCAPE UNIT 2 – MIDTOWN CROSSING STATION

LU-2 incorporates San Vicente Boulevard at its intersections with Pico Boulevard and Venice Boulevard, and extends north to approximately Dockweiler Street, south to approximately 17th Street, east to approximately Mullen Avenue, and west to La Brea Avenue. The proposed Midtown Crossing Station would be located at the intersection of San Vicente Boulevard, Pico Boulevard, and Venice Boulevard on the north side of the shopping center. The proposed station entrance is located south of San Vicente Boulevard at the corner of Pico Boulevard, which is the back side of the big-box stores, as shown in Figure 3.2-4; the entrance would face Pico Boulevard. Construction staging is proposed within the commercial and parking area of the shopping center. The sidewalk zone of influence would encompass the potential construction staging area along Pico Boulevard, San Vicente Boulevard, and Venice Boulevard.

There is a consistent placement of existing streetlights, crosswalks, and street trees on both sides of the street. LU-2 is primarily an auto-oriented commercial corridor surrounded by retail, commercial, some mixed-use development, and several multistory residential buildings on the north side of San Vicente Boulevard, and low-density single-family and multifamily residential on the south side of Venice Boulevard. Buildings in this area are predominantly one or two stories high.

Primary viewers in LU-2 are people who drive, roll, or walk, including residents, travelers, business patrons, and people who work in the area. A landscaped street median with mature trees is located at the

northwest corner of San Vicente Boulevard and Pico Boulevard, and a cement, non-landscaped median is located at the intersection of Venice Boulevard and San Vicente Boulevard. Additional street landscaping is located along the sidewalks and within the parking area at the shopping center.

Visual resources along this corridor are limited. The shopping center dominates views in all directions for primary viewers. Residential areas are located within a block of this landscape unit, as well as some multifamily residences adjacent to San Vicente Boulevard to the northwest. The dominant views from these residences are the street and the shopping center to the south. Residences on the south side of Venice Boulevard have views of the street and the shopping center to the north. People who drive, roll, or walk traveling west on Venice Boulevard have an expansive view of the street with a tree-lined median. Depending on atmospheric conditions, viewers in this area may have limited views of the Santa Monica Mountains to the west. The mountains are not visible from San Vicente Boulevard on the north side of the shopping center where the station would be located.

FIGURE 3.2-4. LU-2, PHOTO #2: MIDTOWN CROSSING STATION ENTRANCE (EXISTING VIEW, FACING SOUTHEAST)

Source: Connect Los Angeles Partners 2024

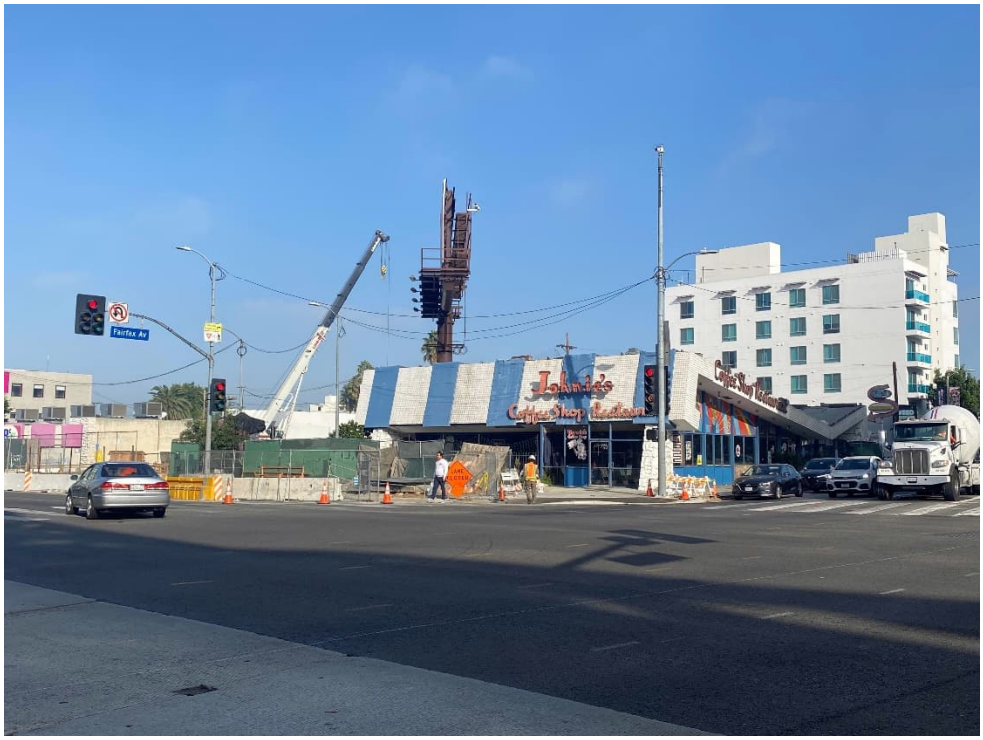
3.2.5.3 LANDSCAPE UNIT 3 – WILSHIRE/FAIRFAX STATION

LU-3 includes the intersection of Wilshire Boulevard and Fairfax Avenue, and extends north to Maryland Drive, south to just before San Vicente Boulevard, east to the Los Angeles County Museum of Art (LACMA), and west to approximately Crescent Heights Boulevard/McCarthy Vista. The proposed Wilshire/Fairfax Station entrance would be located on the north side of Wilshire Boulevard just west of the intersection of Fairfax Avenue in the alleyway between two buildings, as shown in Figure 3.2-5. A nearly three-acre construction staging area would be located on the north side of Wilshire Boulevard between the intersection and San Diego Way. A smaller construction staging area would be located at the northwest corner of Fairfax Avenue and Lindenhurst Avenue. The sidewalk zone of influence would encompass the north side of Wilshire Boulevard for approximately 700 feet west. The sidewalk zone of influence would continue north along both sides of Fairfax Boulevard to approximately Lindenhurst Avenue, extending past the corners of the intersections of Orange Street, 6th Street, and Lindenhurst Avenue.

There is a consistent placement of streetlights, crosswalks, and street trees on both sides of Wilshire Boulevard and Fairfax Avenue. LU-3 is primarily an auto-oriented commercial corridor connecting downtown Los Angeles to points west. The corridor is surrounded by retail, commercial, mixed-use development, and institutional venues, including the Petersen Automotive Museum on the southeast corner and the Academy Museum of Motion Pictures on the northeast corner with LACMA next door. The La Brea Tar Pits and Museum is just east of LACMA but outside of the approximately 0.25-mile RSA. The southwest corner of the Wilshire Boulevard and Fairfax Avenue intersection is dominated by a multistory building that contains a bank and the offices of the Consulate General of Chile. Single- and multifamily housing is within a block of Wilshire Boulevard extending north and south, and the Park La Brea apartment complex with over 4,000 units sits on 160 acres immediately east of Fairfax Avenue and north of the Academy Museum of Motion Pictures and LACMA. Primary viewers in this landscape unit are people who drive, roll, or walk, including residents, travelers, business patrons, and people who work in the area.

Visual resources in this area consist primarily of the institutional and entertainment venues described above. The view east along Wilshire Boulevard is dominated by distinct, futuristic-style architecture (Architect Magazine 2013) and the bold red color of the Petersen Automotive Museum. The Academy of Motion Pictures Museum's unique style (Amelar 2021) and gold mosaic cylinder, a City of Los Angeles Historic-Cultural Monument, is on the northeast corner, dominating the views and adding to the visual character. Johnie's Coffee Shop, another City of Los Angeles Historic-Cultural Monument, sits on the northwest corner. Continuing east, the distant views include street trees and two modern, multistory office buildings. The view north along Fairfax Avenue provides a typical street view of an urban landscape with street trees, streetlights, utility poles, sidewalks, and various commercial and retail businesses. Distant views to the north are limited due to the surrounding urban development. The view west includes the multistory glass office building on the southwest corner and continues with a mix of commercial and retail buildings, with multistory buildings interspersed throughout. The view to the south is a typical urban street view, with the Petersen Automotive Museum and the glass office building the most distinctive features.

FIGURE 3.2-5. LU-3, PHOTO #3: WILSHIRE/FAIRFAX STATION ENTRANCE, NORTHWEST ENTRANCE (EXISTING VIEW, FACING NORTHWEST)



Source: Connect Los Angeles Partners 2024

3.2.5.4 LANDSCAPE UNIT 4 – FAIRFAX/3RD STATION

LU-4 includes the intersection of Fairfax Avenue and 3rd Street, just south of Beverly Boulevard, and extends west to approximately Crescent Heights Boulevard, north to approximately Beverly Boulevard, east to nearly The Grove Drive, and south to approximately Drexel Avenue. This landscape unit includes a large portion of The Original Farmers Market and The Grove shopping center, and the southwest corner of CBS Television City. The proposed Fairfax/3rd Station entrance would be located at the southeast corner of Fairfax Avenue and 3rd Street with the entrance facing 3rd Street. An optional entrance is proposed at the southeast corner of Fairfax Avenue and Farmers Market Place, as shown in Figure 3.2-6. Construction staging would be located at the southeast corner of Fairfax Avenue and 3rd Street. This construction staging area would be approximately 3.8 acres. The optional entrance would also have construction staging at the southeast corner of Fairfax Avenue and Farmers Market Place. The sidewalk zone of influence includes both sides of Fairfax Avenue between Farmers Market Place and Blackburn Avenue, extending past the corners of the respective intersections. The sidewalk zone of influence also extends approximately 150 feet north of the Fairfax Avenue and Farmers Market Place intersection.

Along Fairfax Avenue and 3rd Street, there is a consistent placement of streetlights, signals, street trees, and signage for a variety of businesses. Fairfax Avenue is a major north-south street in the north-central area of the City of Los Angeles connecting to Hollywood and the City of West Hollywood. This portion of Fairfax Avenue is notable for a variety of attractions, including the Original Farmers Market and CBS

Television City on the east side of Fairfax Avenue between 3rd Street and Beverly Boulevard. The Grove shopping center is immediately east and adjacent to the Original Farmers Market at 3rd Street and The Grove Drive. Pan Pacific Park and the Holocaust Museum LA are across from The Grove on the east side of The Grove Drive. In addition to these attractions, retail, commercial services, offices, restaurants, and bars are located along Fairfax Avenue within the RSA. Most residences, which include both single- and multifamily units, extend west of Fairfax Avenue to Crescent Heights Boulevard both north and south of 3rd Street. Hancock Park Elementary School is south of 3rd Street on the east side of Fairfax Avenue between 4th Street and Colgate Avenue. The diversity and density of attractions in this area make Fairfax Avenue one of the most congested streets in Los Angeles. Primary viewers in this landscape unit are people who drive, roll, or walk, including residents, travelers, business patrons, and people who work in the area.

Visual resources include typical urban street views, such as streetlights, as well as the tourist attractions and shopping venues described above. Viewers looking north along Fairfax Avenue have limited views of the distant hills, which are partially blocked by development and atmospheric conditions. Palm trees are the dominant street trees along the Fairfax Avenue sidewalks looking north. The iconic Farmers Market clocktower can be seen looking northeast and would also be visible from the optional station entrance at Fairfax Avenue in the Farmers Market parking lot. Visual resources east and west along 3rd Street are typical of an urban environment, with signage, streetlights, occasional street trees, and retail and commercial business on each side of the street.

FIGURE 3.2-6. LU-4, PHOTO #4: FAIRFAX/3RD STATION, ENTRANCE 1, SOUTH (EXISTING VIEW, FACING SOUTHEAST)

Source: Connect Los Angeles Partners 2024

3.2.5.5 LANDSCAPE UNIT 5 – LA CIENEGA/BEVERLY STATION

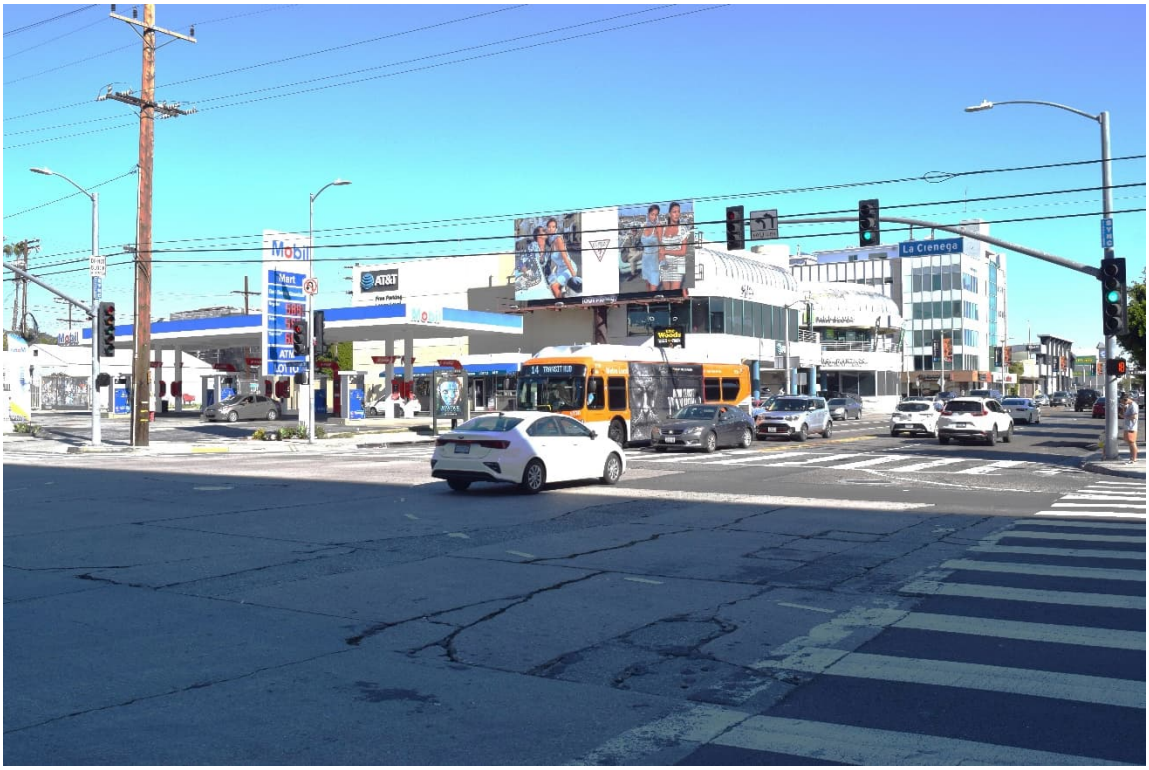
LU-5 includes the intersection of La Cienega Boulevard and Beverly Boulevard, and extends north to approximately Rosewood Avenue, east to Kings Road, south to Blackburn Avenue, and west just beyond San Vicente Boulevard incorporating part of the Cedars-Sinai Medical Center campus. This landscape unit includes the Beverly Center shopping center on the southwest corner of La Cienega Boulevard and Beverly Boulevard, the Beverly Connection shopping center on the southeast corner, and the Sofitel Hotel at the northwest corner. The Gindi Maimonides Academy private school is located at the corner of La Cienega Boulevard and Beverly Place. The proposed La Cienega/Beverly Station entrance would be located on the northeast corner of the intersection (Figure 3.2-7). Two construction staging areas are proposed in this landscape unit: one on the north side of Beverly Boulevard between La Cienega Boulevard and Alfred Avenue, and another on the southwest corner of Beverly Boulevard and Croft Avenue. The sidewalk zone of influence extends approximately 1,200 feet along the north and south sides of Beverly Boulevard, between La Cienega Boulevard and Orlando Avenue, extending around the corners at La Cienega Boulevard, Alfred Avenue, Croft Avenue, and Orlando Avenue.

Street views are typical of a built, urban environment with consistent placement of streetlights, signals, utility poles and wires, limited street trees, and a variety of retail, commercial, and business buildings. Views north from La Cienega Boulevard offer a glimpse of the Hollywood Hills, and views to the west are dominated by the Beverly Center and Sofitel Hotel. Housing in this landscape unit consists of both single- and multifamily units concentrated northwest, northeast, and southeast of Beverly Boulevard.

Primary viewers in the landscape unit are people who drive, roll, or walk, including residents, travelers, business patrons, and people who work in the area, especially commuters traveling to and from the large employment centers in the area, such as Cedars-Sinai Medical Center, the Beverly Center, the Beverly Connection, the Sofitel Hotel, and staff and students of the Gindi Maimonides Academy.

Visual resources are limited to typical urban streetscapes in all directions, a limited view of the Hollywood Hills to the north, and the Beverly Center and Sofitel Hotel dominating views to the west.

FIGURE 3.2-7. LU-5, PHOTO #5: LA CIENEGA/BEVERLY STATION ENTRANCE, AT NORTHEAST CORNER (EXISTING VIEW, FACING NORTHEAST)



Source: Connect Los Angeles Partners 2024

3.2.5.6 LANDSCAPE UNIT 6 – SAN VICENTE/SANTA MONICA STATION (CITY OF WEST HOLLYWOOD)

LU-6 includes the intersection of San Vicente Boulevard and Santa Monica Boulevard, and extends south to approximately Melrose Avenue, west to approximately Willey Lane, north to approximately Betty Way, and east to approximately Westbourne Drive. The Pacific Design Center is a block south of Santa Monica Boulevard and east of San Vicente Boulevard; West Hollywood Park is across the street on the west side of San Vicente Boulevard. The Los Angeles County Sheriff's Department West Hollywood Station is at the southeast corner of Santa Monica Boulevard and San Vicente Boulevard, and the Metro Division 7 bus facility is just east of the Sheriff's Station. Residential areas in this landscape unit are within a block of Santa Monica Boulevard, concentrated northwest of the intersection, and south of Santa Monica Boulevard to Melrose Avenue and east between the Division 7 bus layover facility and Westbourne Drive. These residential areas are a combination of single- and multifamily units.

The proposed San Vicente/Santa Monica Station entrance would be located along Santa Monica Boulevard, east of San Vicente Boulevard. Two entrance options are proposed for this station: one entrance option would be at the southeast corner of Santa Monica Boulevard and San Vicente Boulevard at the existing Sheriff's Station (Figure 3.2-8), and the other optional entrance option would be located at the northeast corner of Santa Monica Boulevard and Palm Avenue. Construction staging is proposed at two locations incorporating approximately three acres total: at the northeast corner of Santa Monica Boulevard and Palm Avenue and at the Los Angeles County Sheriff's Station. The sidewalk zone of influence would be on the north and south sides of Santa Monica Boulevard between San Vicente Boulevard and Huntley Drive, extending around the corners of the intersections at Larrabee Street, Palm Avenue, Hancock Avenue, and Huntley Drive. The sidewalk zone of influence would also extend approximately 480 feet south along the western edge of the Sheriff's Station on San Vicente Boulevard.

Street views include typical features such as streetlights, signals, and occasional art sculptures in the street medians, particularly along Santa Monica Boulevard. Street trees are abundant along the sidewalk and within the median and dominate views both east and west along Santa Monica Boulevard. Permanent LED globe lanterns extend above Santa Monica Boulevard, attached to existing light poles. Businesses along Santa Monica Boulevard include a variety of retail stores, restaurants, and bars, interspersed with small commercial and business offices. Primary viewers in this landscape are people who drive, roll, or walk, including residents, travelers, business patrons, and people who work in the area.

Visual resources include the numerous mature street trees and decorative streetscaping previously described. Distant views in all directions, including views of the Hollywood Hills and the Santa Monica and San Gabriel Mountains, are limited by the flat terrain, street trees, streetlights, utility poles, and extensive urban development. The Pacific Design Center's distinctive architecture of blue, green, and red glass buildings are notable features looking south from the intersection. The red glass building can be seen through the trees east along Santa Monica Boulevard until approximately Palm Avenue, while its view becomes blocked moving west from the intersection along Santa Monica Boulevard. Along San Vicente Boulevard south of the intersection, all three of the Pacific Design Center's buildings dominate views to the east.

FIGURE 3.2-8. LU-6, PHOTO #6: SAN VICENTE/SANTA MONICA STATION, ENTRANCE OPTION 1, SOUTH (EXISTING VIEW, FACING SOUTHEAST)

Source: Connect Los Angeles Partners 2024

3.2.5.7 LANDSCAPE UNIT 7 – FAIRFAX/SANTA MONICA STATION (CITY OF WEST HOLLYWOOD)

LU-7 includes the intersection of Fairfax Avenue and Santa Monica Boulevard, and extends north to Fountain Avenue, west to Crescent Heights Boulevard, south to Willoughby Avenue, and east to Spaulding Avenue. A retail center including a grocery store is located on the northeast corner; a small, multi-unit retail center is on the northwest corner; a restaurant is located on the southwest corner; and a retail business is located on the southeast corner. The proposed Fairfax/Santa Monica Station entrance would be located at one of two locations: either at the northeast corner of Santa Monica Boulevard and Fairfax Avenue, shown in Figure 3.2-9, or at the southeast corner of Santa Monica Boulevard and Fairfax Avenue.

Residential areas in this landscape unit are located within a block of the intersection of Santa Monica Boulevard and Fairfax Avenue in all directions. The majority of housing in this landscape unit are high-density, one- and two-story multifamily units.

Street views within this landscape unit are typical of a built, urban environment. Abundant street trees line the sidewalks, similar to Santa Monica Boulevard in LU-6. Although this landscape unit is also within the City of West Hollywood, there are no LED globe string lights extending across the street. In addition to street trees, there is consistent placement of streetlights, signals, and business signage. Landscaped medians are present along Santa Monica Boulevard and along Fairfax Avenue south of the intersection

but are not present north of the intersection. Primary viewers in this landscape unit are people who drive, roll, or walk, including residents, travelers, business patrons, and people who work in the area.

Visual resources are limited to a typical built, urban environment, although numerous street trees line both streets and most buildings do not exceed three stories. Distant views are primarily blocked due to the flat terrain and urban development which, along with the visual perspective of linear features, contributes to a limited, narrow view north along Fairfax Avenue of the Hollywood Hills.

FIGURE 3.2-9. LU-7, PHOTO #7: FAIRFAX/SANTA MONICA STATION, ENTRANCE OPTION 1, NORTHEAST (EXISTING VIEW, FACING EAST)

Source: Connect Los Angeles Partners 2024

3.2.5.8 LANDSCAPE UNIT 8 – LA BREA/SANTA MONICA STATION (CITY OF WEST HOLLYWOOD)

LU-8 includes the intersection of La Brea Avenue and Santa Monica Boulevard, and extends north to Fountain Avenue, west to Poinsettia Drive, south to Willoughby Avenue, and east to approximately Citrus Avenue. La Brea Avenue is the approximate eastern boundary of the City of West Hollywood. A multistory apartment complex is located on the northwest corner of the intersection of La Brea Avenue and Santa Monica Boulevard; the West Hollywood Gateway shopping center is on the southwest corner; a strip mall is on the northeast corner; and a commercial building is on the southeast corner of the intersection.

Although the proposed La Brea/Santa Monica Station has station box and crossover options depending on the alignments, the station entrance for all alignments would be located on the northeast corner of La Brea Avenue and Santa Monica Boulevard, as shown in Figure 3.2-10.

For the KNE San Vicente–Fairfax and Fairfax Alignments, construction staging would be approximately 270 feet north of Santa Monica Boulevard between Detroit Street and La Brea Avenue and on the northeast corner of the Santa Monica Boulevard and La Brea Avenue intersection, comprising nearly four acres. The sidewalk zone of influence would be located on the north and south sides of Santa Monica Boulevard, between La Brea Avenue and Orange Drive. At La Brea Avenue, Sycamore Avenue, and Orange Drive, the sidewalk zone of influence would extend around the corners of each of these intersections.

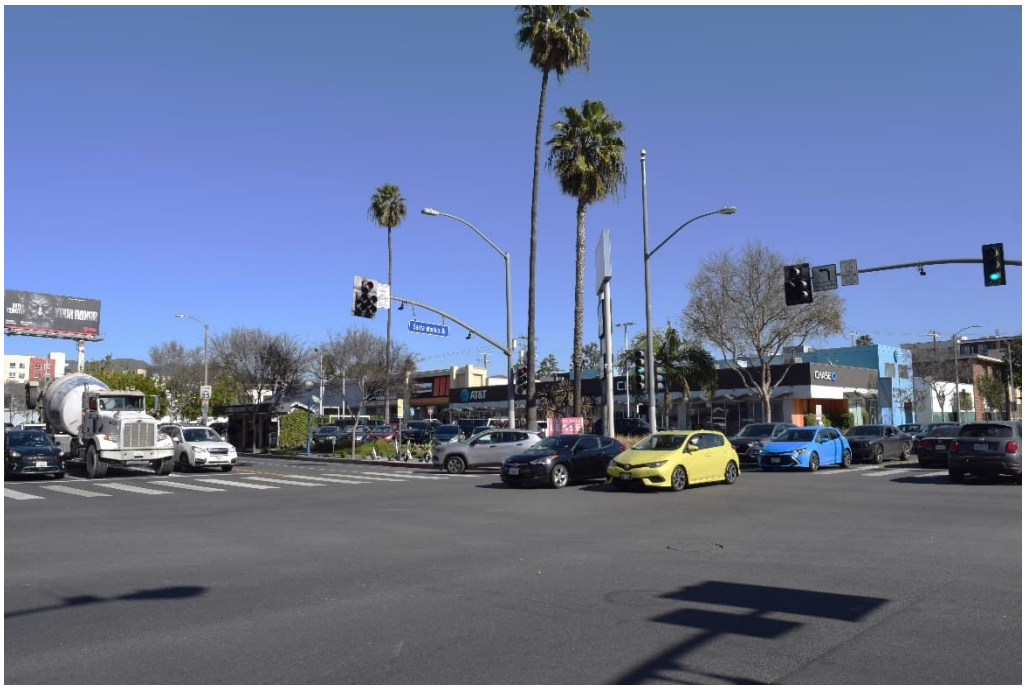
Construction staging for the KNE La Brea Alignment is the same as the sites described for the KNE San Vicente–Fairfax and Fairfax Alignments, but the sidewalk zone of influence would be on the east and west sides of La Brea Avenue between Santa Monica Boulevard and Lexington Avenue, extending around the corners of the intersections. Along Santa Monica Boulevard, the sidewalk zone of influence would also extend 320 feet east to the intersection of Santa Monica Boulevard and Sycamore Avenue.

Residences in this landscape unit are mainly located approximately one block north of Santa Monica Boulevard, west of La Brea Avenue, and are a mix of single-family, and one- and two-story multifamily units. Numerous multistory, multifamily units are located between Sycamore Avenue and Citrus Avenue to the east. South of Santa Monica Boulevard to Willoughby Avenue is a combination of multistory, multifamily residential, retail, and commercial businesses.

Street views are similar to views in LU-7, which also includes Santa Monica Boulevard through the City of West Hollywood, with the character of Santa Monica Boulevard becoming more commercial and industrial to the east in the City of Los Angeles. Street trees continue to dominate views along Santa Monica Boulevard, particularly to the west, while this segment of Santa Monica Boulevard also includes LED globe string lights across the boulevard, along with streetlights, signals, and a variety of business signage. North and south along La Brea Avenue, views are dominated by street trees, including occasional palm trees, and a variety of retail and commercial establishments and restaurants. The view north is similar to the view south, but with a fragmented view of the distant Hollywood Hills. Primary viewers in the area are people who drive, roll, or walk, including residents, travelers, business patrons, and people who work in the area.

Visual resources are limited to a typical built, urban environment, although numerous street trees line both streets and most buildings do not exceed three stories. Distant views are blocked due to the flat terrain and development.

FIGURE 3.2-10. LU-8, PHOTO #8: LA BREA/SANTA MONICA STATION ENTRANCE, NORTHEAST (EXISTING VIEW, FACING NORTHEAST)



Source: Connect Los Angeles Partners 2024

3.2.5.9 LANDSCAPE UNIT 9 – HOLLYWOOD/HIGHLAND STATION

LU-9 includes the intersection of Hollywood Boulevard and Highland Avenue and extends north to approximately Franklin Avenue, west to Sycamore Avenue, south to Sunset Boulevard, and east to approximately Cherokee Avenue. The Hollywood/Highland Station has two configurations based on whether it would be constructed as an inline station or a terminus station, but this would not affect the station entrance options. The station also has two entrance options that are the same for all alignments: one entrance option at the southwest corner of Hollywood Boulevard and Highland Avenue, shown in Figure 3.2-11, or one entrance option at the southeast corner of the intersection.

For the southwest entrance option for the inline station, two construction staging areas have been identified at the southeast corner of Highland Avenue and Selma Avenue and at the southwest corner of Hollywood Boulevard and Highland Avenue. The sidewalk zone of influence for this entrance option includes the east and west sides of Highland Avenue between Sunset Boulevard and Hollywood Boulevard, extending around the corners of the intersections at Selma Avenue, Hawthorn Avenue, and Hollywood Boulevard. At Highland Avenue and Hollywood Boulevard, the sidewalk zone of influence extends approximately 115 feet west along the construction staging area on Hollywood Boulevard.

For the southeast entrance option for the inline station, three construction staging areas have been identified: the southeast corner of Highland Avenue and Selma Avenue, the southeast corner of Hollywood Boulevard and Highland Avenue, and the southwest corner of Hollywood Boulevard and Highland Avenue. The sidewalk zone of influence for this entrance option is the same as the southwest entrance option, except that at Highland Avenue and Hollywood Boulevard, the sidewalk zone of influence extends approximately 190 feet west along the construction staging area on Hollywood Boulevard.

For the terminus station configuration for both entrance options, an additional construction staging area and tunnel boring machine (TBM) extraction site would be located at the southwest corner of Highland Avenue and Franklin Avenue. The sidewalk zone of influence would extend north along Highland Avenue to Franklin Avenue, extending around the corners of Yucca Street and Franklin Avenue.

Residential units in this landscape unit are mainly high-density, multistory, and multifamily units. Several hotels are located within this area, as are a number of tourist attractions, including the Ovation Hollywood entertainment complex, which includes The Dolby Theatre and TCL Chinese Theatre, the Hollywood Museum, the El Capitan Theatre, Ripley's Believe It or Not Museum, and the Hollywood Wax Museum. The Hollywood Walk of Fame along Hollywood Boulevard is known for the names of notable entertainers and celebrities embedded into the sidewalk. Street views in this landscape unit incorporate these tourist attractions, along with various retail businesses and restaurants, with the standard streetlights, signals, and scattered street trees, which are limited to palm trees. Primary viewers in this landscape unit are people who drive, roll, or walk, including residents, travelers, business patrons, and people who work in the area.

Visual resources include the aforementioned tourist attractions and buildings such as the Ovation Hollywood complex and the El Capitan Theatre, along with distinctive billboards and signage on buildings. A distinctive billboard on the northwest corner of the intersection and the 13-story Hollywood First National Bank Building on the northeast corner are dominant visual features in this landscape unit. Looking north along Highland Avenue, the steeple of the Hollywood United Methodist Church is visible. The terrain is flat, and a variety of multistory buildings block distant views.

FIGURE 3.2-11. LU-9, PHOTO #9: HOLLYWOOD/HIGHLAND STATION, ENTRANCE OPTION 1, SOUTHWEST (EXISTING VIEW, FACING SOUTHWEST)

Source: Connect Los Angeles Partners 2024

3.2.5.10 LANDSCAPE UNIT 10 – WILSHIRE/LA BREA STATION

LU-10 includes the intersection of Wilshire Boulevard and La Brea Avenue and extends north to approximately 6th Street, west to Dunsmuir Avenue, south to 9th Street, and east to Citrus Avenue. The Wilshire/La Brea Station is specific to the KNE La Brea Alignment only and would connect to the future Metro D Line station. The future D Line entrance at the northwest corner of Wilshire Boulevard and La Brea Avenue would provide access to both the D Line and K Line. Additionally, a new entrance option would be constructed at the southwest corner of La Brea Avenue and 6th Street, as shown in Figure 3.2-12.

Construction staging areas for the station would be at the northwest corner of Wilshire Boulevard and La Brea Avenue, 300 feet north of the corner of Wilshire Boulevard and La Brea Avenue, at the southwest corner of 6th Street and La Brea Avenue, at the northwest corner of 6th Street and La Brea Avenue, at the northeast corner of 6th Street and La Brea Avenue, and 175 feet southeast of the corner of 6th Street and La Brea Avenue. The sidewalk zone of influence would be along both sides of La Brea Avenue between 6th Street and Wilshire Boulevard, extending around the corners of each respective intersection. The sidewalk zone of influence would also be along all street-facing edges of the construction staging areas.

There is a consistent placement of streetlights, crosswalks, and street trees on both sides of the street in this landscape unit, which is primarily an auto-oriented commercial corridor surrounded by retail, commercial, institutional, and some mixed-use development. West of La Brea Avenue, north and south of

Wilshire Boulevard, the residences are primarily two- and three-story multifamily units, while east of La Brea Avenue and north and south of Wilshire Boulevard is a mix of single-family and multifamily residences. Primary viewers in this landscape unit are people who drive, roll, or walk, including residents, travelers, business patrons, and people who work in the area.

Street views are typical of a built, urban environment, consisting of streetlights, signals, utility poles, scattered street trees, and business signage. Visual resources are limited within this landscape unit. Looking west from the Wilshire Boulevard/La Brea Avenue intersection, the near view includes construction activity and staging on the north and south sides of the street. The distant view west includes street trees, business signage and billboards, and various retail, commercial, and office buildings of various stories.

FIGURE 3.2-12. LU-10, PHOTO #10: WILSHIRE/LA BREA STATION ENTRANCE, 6TH STREET (EXISTING VIEW, FACING SOUTHWEST)

Source: Connect Los Angeles Partners 2024

3.2.5.11 LANDSCAPE UNIT 11 – LA BREA/BEVERLY STATION

LU-11 includes the La Brea Avenue and Beverly Boulevard intersection and extends north to approximately Rosewood Avenue, west to Alta Vista Boulevard, south to approximately 1st Street, and east to Citrus Avenue. The proposed La Brea/Beverly Station is specific to the KNE La Brea Alignment only and would be located at the intersection of La Brea Avenue and Beverly Boulevard. This station has two options for a street-level entrance, one at the northwest corner of the intersection, as shown in Figure 3.2-13 or at the northeast corner of the intersection. For the northwest entrance option, construction staging would occur at the southwest corner of La Brea Avenue and Oakwood Avenue and the northeast corner of La Brea Avenue and Beverly Boulevard. For the northeast entrance option, construction staging would occur at the southwest corner of La Brea Avenue and Oakwood Avenue and the northwest corner of La Brea Avenue and Beverly Boulevard. The sidewalk zone of influence is the same for both entrance options: the east and west sides of La Brea Avenue between Beverly Boulevard and Oakwood Avenue, extending approximately 320 feet north of Oakwood Avenue and extending around the corners of the intersections of La Brea Avenue and Beverly Boulevard, and La Brea Avenue and Oakwood Avenue.

This is an auto-oriented corridor with a variety of retail businesses, commercial and office buildings, and restaurants. Residences are located within one block of both streets in all directions and are a combination of single- and multifamily units. Primary viewers in this landscape unit are people who drive, roll, or walk, including residents, travelers, business patrons, and people who work in the area.

Street views are typical of a built, urban environment, and visual resources are limited within this landscape unit. The immediate views around the La Brea/Beverly intersection include a strip mall on the northeast corner, gas stations on the northwest and southwest corners, and a commercial business on the southwest corner. Street trees are visible to the west, south, and east, but are limited along northbound La Brea Avenue. Distant views to the east are of residential areas, and to the north, west, and south are views typical of a commercial corridor. The flat terrain and numerous structures block distant views, but the Hollywood Hills are just visible to the north from the intersection.

FIGURE 3.2-13. LU-11, PHOTO #11: LA BREA/BEVERLY STATION, ENTRANCE OPTION 1, NORTHWEST (EXISTING VIEW, FACING SOUTH)

Source: Connect Los Angeles Partners 2024

3.2.5.12 LANDSCAPE UNIT 12 – HOLLYWOOD BOWL STATION

LU-12 includes the optional Hollywood Bowl Station. The landscape unit extends north approximately to the Pilgrimage Bridge crossing the US-101 freeway, west to approximately Los Tilos Road, south to approximately Camrose Drive, and east to approximately Odin Street and the US-101 freeway. This station is optional for all alignments and has two entrance option locations. Entrance Option 1 would be located on the west side of Highland Avenue within the Hollywood Bowl Parking Lot B, as shown in Figure 3.2-14. Entrance Option 2 would be located on the east side of Highland Avenue at the Hollywood Bowl Parking Lot C.

Construction staging for the entrance options would be located at Parking Lot B on Highland Avenue, Parking Lot C on Odin Street, Parking Lot D between Odin Street and Milner Road, and on the west side of Cahuenga Boulevard north of Pilgrimage Bridge. The sidewalk zone of influence would be on both sides of Highland Avenue between Milner Road and the US-101 entrance ramp adjacent to Parking Lot C, extending along all street-facing edges of the construction staging areas. A section on the west side of Cahuenga Boulevard just north of the Pilgrimage Bridge is also within the sidewalk zone of influence.

Within this landscape unit, Highland Avenue is an auto-oriented corridor. Street trees are abundant as are streetlights and signals. There are no visible retail store fronts or business signage. A variety of residences are scattered on the surrounding streets and hillsides. South of Camrose Drive and Milner Street, there are several hotels and multifamily residential units. Primary viewers in this landscape unit are people who drive, roll, or walk, including residents, travelers, and commuters, as well as patrons of the Hollywood Bowl.

Visual resources include the numerous street trees lining both sides of Highland Avenue, the Hollywood Bowl sign in the median at the intersection of Highland Avenue at the entrance to the Hollywood Bowl, and the Hollywood Bowl sign and fountain on the southwest and southeast corners, respectively, of Highland Avenue and Pat Moore Way. The Hollywood Cross, also known as the Hollywood Pilgrimage Memorial Monument, a City of Los Angeles Historic-Cultural Monument, is visible in the distance to the northeast from this location. Views of the surrounding hillsides are blocked due to elevation and the surrounding trees. To the north, part of the US-101 ramp is visible. The view south is of street trees, and in the far distance a few tall buildings can be seen.

FIGURE 3.2-14. LU-12, PHOTO #12: HOLLYWOOD BOWL STATION, ENTRANCE OPTION 1, WEST (EXISTING VIEW, FACING NORTHWEST)

Source: Connect Los Angeles Partners 2024

3.2.5.13 LANDSCAPE UNIT 13 – MAINTENANCE AND STORAGE FACILITY

LU-13 includes the proposed MSF. The MSF would involve an expansion of the existing Metro Division 16 Yard located between Arbor Vitae Street and 96th Street, as shown in Figure 3.2-15.

This area consists mainly of light industrial and commercial businesses and operations associated with Los Angeles International Airport (LAX), such as rental car locations and car storage. Some single- and multifamily residences are located between Manchester Avenue and Arbor Vitae Street, between Bellanca Avenue and Airport Boulevard, and extending west to Sepulveda Boulevard. Several hotels are located farther south near Century Boulevard between the I-405 freeway and Sepulveda Boulevard. A limited number of small restaurants are located along Arbor Vitae, but other than two gas stations at the southeast and northwest corners of Aviation Boulevard and Arbor Vitae Street, there are no retail

businesses in the immediate area. Primary viewers in the landscape unit are people who drive, roll, or walk, including residents, travelers, business patrons, and people who work in the area.

Street views consist of streetlighting, utility poles, and the industrial and commercial facilities. Street trees are limited, although there is some street landscaping, particularly north along Aviation Boulevard. Visual resources in the area are limited and consist of the aforementioned buildings, with limited street trees and landscaping. Although the terrain is flat, distant views are generally blocked by buildings and warehouses. The LAX/Metro Transit Center Station, currently under construction, is located on Aviation Boulevard and is visible to viewers looking south from Arbor Vitae Street. The elevated guideway of the LAX Automated People Mover is also visible looking south from Aviation Boulevard and Arbor Vitae Street. To the southwest and southeast, aircraft may be viewed ascending and descending from LAX. Depending on atmospheric conditions, looking north-northeast there may be limited views of the Hollywood Hills and the San Gabriel Mountains in the distance.

FIGURE 3.2-15. LU 13, PHOTO #13: MSF – EXPANSION OF DIVISION 16 YARD, BETWEEN ARBOR VITAE STREET ON THE NORTH AND 96TH STREET ON THE SOUTH (EXISTING VIEW, FACING SOUTH)

Source: Connect Los Angeles Partners 2024

3.2.6 PROJECT MEASURES

Project measures are design features, best management practices, or other commitments that Metro would implement as part of all proposed alignments and stations, the design option, and the MSF to reduce or avoid environmental effects associated with project construction and operation. Project measures are not the same as mitigation measures, which are used to reduce an environmental impact's significance level. Where applicable, project measures are also discussed in Section 3.2.7 as part of the evaluation of environmental impacts.

3.2.6.1 PM AES-1: CONSTRUCTION LIGHTING

Safety and security lighting would be used during construction but would be directed toward the construction staging areas and/or shielded with temporary screening to minimize light spillover and glare onto adjacent areas. Any nighttime construction required for the alignments and stations, the design option, and the MSF would not be a substantial source of light and glare because other nighttime lighting sources already exist around the construction area, including streetlights and building illumination.

3.2.7 IMPACT EVALUATION AND MITIGATION MEASURES

This analysis presents the construction and operational impacts for aesthetics, as well as any applicable mitigation measures associated with KNE. A summary of the impact conclusions and applicable mitigation measures is found in Table 3.2-1 in Section 3.2.7.6.

3.2.7.1 IMPACT AES-1: SCENIC VISTAS

Impact AES-1: Would the project have a substantial adverse effect on a scenic vista?

3.2.7.1.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.2.7.1.1.1 CONSTRUCTION IMPACTS

No Impact. The KNE San Vicente–Fairfax Alignment includes LU-1 through LU-9. Construction of the alignment and stations would temporarily introduce visually disruptive elements into each landscape unit, including light and heavy excavation, TBMs and related equipment, impacts to curbs and gutters, structural falsework, tree removal, security fencing and lighting, stockpiled building materials, safety and directional signage, and installation of project infrastructure, station plazas, and ancillary facilities. All stations for this alignment would be constructed using the cut-and-cover method, which allows a temporary decking structure to be placed over the cut following the first excavation and allows for traffic on the surface.

Construction activities, while a temporary visual nuisance, would not obstruct scenic vistas because there are no scenic vistas within this alignment as identified by relevant planning documents, and views within the landscape units that are part of this alignment are of an urbanized, built environment. Construction activities would be temporary and limited to the immediate area and would be shielded by temporary fencing to the extent feasible. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during construction.

3.2.7.1.1.2 OPERATIONAL IMPACTS

No Impact. The KNE San Vicente–Fairfax Alignment includes LU-1 through LU-9. Operation of the alignment and station would introduce new features, such as the station plazas and entrances, which would represent a change in the views compared to existing conditions. The LUs identified within this alignment are characterized by a primarily urban environment featuring a variety of commercial, industrial, and residential development. While no scenic vistas are specifically identified in relevant

planning documents, the LUs within this alignment provide localized scenic vistas that may be notable to residents and visitors. For example, within LU-6 (San Vicente/Santa Monica Station), the intersection of San Vicente Boulevard and Santa Monica Boulevard is notable for numerous visual resources that include the Pacific Design Center, the rainbow crosswalks, landscaped medians, numerous street trees, and distinctive LED globe string lights that hang across the boulevard. Within LU-9 (Hollywood/Highland Station) the intersection is notable for the numerous unique visual resources that include the Dolby Theatre, the Ovation Shopping and Entertainment Complex, the Hollywood Wax Museum, TLC Chinese Theatre, and the Hollywood Walk of Fame. The view north along Highland Avenue includes the steeple of the Hollywood United Methodist Church, as well as a limited view of the Hollywood Hills. However, the iconic Hollywood Sign is not visible from street level in this area.

The station plazas would not be at a height greater than existing nearby structures. Station features, such as emergency egress facilities or emergency exits that provide access to the surface via hatches located inside or outside of the public right-of-way and the hatches themselves, would be flush with the ground or sidewalk or integrated into a building so as not be intrusive to viewers. Station ventilation structures would be designed to be separate from emergency exits and located at ground or sidewalk level or incorporated into a future building so as not to be visually intrusive. The visibility of the tunnel portal would be limited to the station entrance plaza. Visible features of underground stations at street level include entrances, signage, and other ancillary facilities such as escalators, elevators, stairs, and station boarding areas. However, these areas would be more visible to people in the immediate vicinity of the station entrance and would not conflict with the overall views in the LUs. Aboveground station components would be designed consistent with the MRDC, the Metro Art Program Policy, the Metro Systemwide Station Design Standards, and the Metro Tree Policy. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during operations.

3.2.7.1.2 KNE FAIRFAX ALIGNMENT

3.2.7.1.2.1 CONSTRUCTION IMPACTS

No Impact. The KNE Fairfax Alignment includes LU-1, LU-2, LU-3, LU-4, LU-7, LU-8, and LU-9. Construction of the alignment and stations would temporarily introduce visually disruptive elements into each landscape unit, including light and heavy excavation, TBMs and related equipment, impacts to curbs and gutters, structural falsework, tree removal, security fencing and lighting, stockpiled building materials, safety and directional signage, and installation of project infrastructure, station plazas, and ancillary facilities. All stations for this alignment would be constructed using the cut-and-cover method, which allows a temporary decking structure to be placed over the cut following the first excavation and allows for traffic on the surface.

Construction activities, while a temporary visual nuisance, would not obstruct scenic vistas because there are no scenic vistas within this alignment as identified by relevant planning documents, and views within the landscape units that are part of this alignment are of an urbanized, built environment. Construction activities would be temporary and limited to the immediate area and would be shielded by temporary fencing to the extent feasible. Therefore, the KNE Fairfax Alignment would have no impact during construction.

3.2.7.1.2.2 OPERATIONAL IMPACTS

No Impact. The KNE Fairfax Alignment includes LU-1, LU-2, LU-3, LU-4, LU-7, LU-8, and LU-9. Operation of the alignment and station would introduce new features, such as the station plazas and entrances, which would represent a change in the views compared to existing conditions. The LUs identified within this alignment are characterized by a primarily urban environment featuring a variety of commercial, industrial, and residential development. While no scenic vistas are specifically identified in relevant planning documents, the LUs within this alignment provide localized scenic vistas that may be notable to residents and visitors. For example, within LU-9 (Hollywood/Highland Station) the intersection is notable for the numerous unique visual resources that include the Dolby Theatre, the Ovation Shopping and Entertainment Complex, the Hollywood Wax Museum, TLC Chinese Theatre, and the Hollywood Walk of Fame. The view north along Highland Avenue includes the steeple of the Hollywood United Methodist Church, as well as a limited view of the Hollywood Hills. However, the iconic Hollywood Sign is not visible from street level in this area.

The station plazas would not be at a height greater than existing nearby structures. Station features, such as emergency egress facilities or emergency exits that provide access to the surface via hatches located inside or outside of the public right-of-way and the hatches themselves, would be flush with the ground or sidewalk or integrated into a building so as not be intrusive to viewers. Station ventilation structures would be designed to be separate from emergency exits and located at ground or sidewalk level or incorporated into a future building so as not to be visually intrusive. The visibility of the tunnel portal would be limited to the station entrance plaza. Visible features of underground stations at street level include entrances, signage, and other ancillary facilities such as escalators, elevators, stairs, and station boarding areas. However, these areas would be more visible to people in the immediate vicinity of the station entrance and would not conflict with the overall views in the LUs. Aboveground station components would be designed consistent with the MRDC, the Metro Art Program Policy, the Metro Systemwide Station Design Standards, and the Metro Tree Policy. Therefore, the KNE Fairfax Alignment would have no impact during operations.

3.2.7.1.3 KNE LA BREA ALIGNMENT

3.2.7.1.3.1 CONSTRUCTION IMPACTS

No Impact. The KNE La Brea Alignment includes LU-1, LU-2, LU-8, LU-9, LU-10, and LU-11. Construction of the alignment and stations would temporarily introduce visually disruptive elements into each landscape unit, including light and heavy excavation, TBMs and related equipment, impacts to curbs and gutters, structural falsework, tree removal, security fencing and lighting, stockpiled building materials, safety and directional signage, and installation of project infrastructure, station plazas, and ancillary facilities. All stations for this alignment would be constructed using the cut-and-cover method, which allows a temporary decking structure to be placed over the cut following the first excavation and allows for traffic on the surface.

Construction activities, while a temporary visual nuisance, would not obstruct scenic vistas because there are no scenic vistas within this alignment as identified by relevant planning documents, and views within

the landscape units that are part of this alignment are of an urbanized, built environment. Construction activities would be temporary and limited to the immediate area and would be shielded by temporary fencing to the extent feasible. Therefore, the KNE La Brea Alignment would have no impact during construction.

3.2.7.1.3.2 OPERATIONAL IMPACTS

No Impact. The KNE La Brea Alignment includes LU-1, LU-2, LU-8, LU-9, LU-10, and LU-11. Operation of the alignment and station would introduce new features, such as the station plazas and entrances, which would represent a change in the views compared to existing conditions. The LUs identified within this alignment are characterized by a primarily urban environment featuring a variety of commercial, industrial, and residential development. While no scenic vistas are specifically identified in relevant planning documents, the LUs within this alignment provide localized scenic vistas that may be notable to residents and visitors. For example, within LU-9 (Hollywood/Highland Station) the intersection is notable for the numerous unique visual resources that include the Dolby Theatre, the Ovation Shopping and Entertainment Complex, the Hollywood Wax Museum, TLC Chinese Theatre, and the Hollywood Walk of Fame. The view north along Highland Avenue includes the steeple of the Hollywood United Methodist Church, as well as a limited view of the Hollywood Hills. However, the iconic Hollywood Sign is not visible from street level in this area.

The station plazas would not be at a height greater than existing nearby structures. Station features, such as emergency egress facilities or emergency exits that provide access to the surface via hatches located inside or outside of the public right-of-way and the hatches themselves, would be flush with the ground or sidewalk or integrated into a building so as not be intrusive to viewers. Station ventilation structures would be designed to be separate from emergency exits and located at ground or sidewalk level or incorporated into a future building so as not to be visually intrusive. The visibility of the tunnel portal would be limited to the station entrance plaza. Visible features of underground stations at street level include entrances, signage, and other ancillary facilities such as escalators, elevators, stairs, and station boarding areas. However, these areas would be more visible to people in the immediate vicinity of the station entrance and would not conflict with the overall views in the LUs. Aboveground station components would be designed consistent with the MRDC, the Metro Art Program Policy, the Metro Systemwide Station Design Standards, and the Metro Tree Policy. Therefore, the KNE La Brea Alignment would have no impact during operations.

3.2.7.1.4 HOLLYWOOD BOWL DESIGN OPTION

3.2.7.1.4.1 CONSTRUCTION IMPACTS

No Impact. The Hollywood Bowl Design Option is within LU-12 (Hollywood Bowl). Construction of the Hollywood Bowl Design Option would temporarily introduce visually disruptive scenic elements to the landscape unit. The tunnel and station associated with the design option would be constructed using the sequential excavation method, which entails conventional mining techniques and equipment for hard rock excavation. Construction would include light and heavy excavation, TBM extraction and related equipment, impacts to curbs and gutters, structural falsework, tree removal, security fencing and lighting,

stockpiled building materials, safety and directional signage, and installation of project infrastructure, station plaza, and ancillary facilities.

Construction activities, while a temporary visual nuisance, would not obstruct scenic vistas as there are no scenic vistas identified by relevant planning documents within LU-12. Furthermore, Highland Avenue is primarily a transportation corridor; visual resources are limited; and distant views are limited by topography. Therefore, the Hollywood Bowl Design Option would have no impact during construction.

3.2.7.1.4.2 OPERATIONAL IMPACTS

No Impact. The Hollywood Bowl Design Option is within LU-12 (Hollywood Bowl). Operation of the design option would introduce new features, the station plaza and entrance, along with ancillary components to LU-12, which would represent a change in the ground-level views compared to existing conditions. The station entrance would not exceed the height of nearby structures. Station features, such as emergency egress facilities or emergency exits that provide access to the surface via hatches that would be located inside or outside of the public right-of-way and the hatches themselves, would be flush with the ground or sidewalk or integrated into a building so as not be intrusive to viewers. Station ventilation structures would be designed to be separate from emergency exits and located at ground or sidewalk level or incorporated into a future building so as not to be visually intrusive. The visibility of the tunnel portal would be limited to the station entrance plaza. Visible features of the underground station at street level include entrances, signage, and other ancillary facilities such as escalators, elevators, stairs, and station boarding areas. However, these areas would be more visible to people in the immediate vicinity of the station entrance and would not conflict with the overall views in the LU. Aboveground station components would be designed consistent with the MRDC, the Metro Art Program Policy, the Metro Systemwide Station Design Standards, and the Metro Tree Policy. No scenic vistas are identified in relevant planning documents for LU-12. Further, Highland Avenue is primarily a transportation corridor; visual resources are limited; and distant views are limited by topography. Therefore, the Hollywood Bowl Design Option would have no impact during operations.

3.2.7.1.5 MAINTENANCE AND STORAGE FACILITY

3.2.7.1.5.1 CONSTRUCTION IMPACTS

No Impact. Construction of the MSF would introduce visually disruptive activities such as demolition, site clearing, and grading to LU-13 but would not substantially obstruct views of scenic vistas. Visual resources and scenic views are limited in this LU. Distant views are limited due to the surrounding industrial development. Construction activities would not result in visual impacts to primary viewers because the site is surrounded by relatively wide streets and paved areas that act as visual buffers. There are no scenic vistas identified in relevant planning documents. All construction activities and staging would comply with Metro and local guidelines related to construction activities. Therefore, the MSF would have no impact during construction.

3.2.7.1.5.2 OPERATIONAL IMPACTS

No Impact. Operational impacts of the MSF would introduce new elements to the immediate views in LU-13. However, the MSF would generally fit within the context of the existing industrial character of the area and would be constructed according to Metro design features, which may contribute to improving scenic quality of the surrounding area. In addition, no scenic vistas are identified in relevant planning documents. Therefore, the MSF would have no impact during operation.

3.2.7.2 IMPACT AES-2: SCENIC HIGHWAYS

Impact AES-2: Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

3.2.7.2.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.2.7.2.1.1 CONSTRUCTION IMPACTS

No Impact. No state-designated scenic highways or eligible state scenic highways are located within the LUs of the KNE San Vicente–Fairfax Alignment. As a result, construction of the alignment would not damage any scenic resources (e.g., trees, rock outcroppings, or historic buildings) within a state-designated or eligible scenic highway. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during construction.

3.2.7.2.1.2 OPERATIONAL IMPACTS

No Impact. Operation of the KNE San Vicente–Fairfax Alignment would not result in impacts to any scenic resources within a state-designated or eligible scenic highway. No state-designated or eligible scenic highways are within, or adjacent to, the alignment. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during operation.

3.2.7.2.2 KNE FAIRFAX ALIGNMENT

3.2.7.2.2.1 CONSTRUCTION IMPACTS

No Impact. No state-designated scenic highways or eligible state scenic highways are located within the LUs of the KNE Fairfax Alignment. As a result, construction of the alignment would not damage any scenic resources (e.g., trees, rock outcroppings, or historic buildings) within a state-designated or eligible scenic highway. Therefore, the KNE Fairfax Alignment would have no impact during construction.

3.2.7.2.2.2 OPERATIONAL IMPACTS

No Impact. Operation of the KNE Fairfax Alignment would not result in impacts to any scenic resources within a state-designated or eligible scenic highway. No state-designated or eligible scenic highways are within, or adjacent to, the alignment. Therefore, the KNE Fairfax Alignment would have no impact during operation.

3.2.7.2.3 KNE LA BREA ALIGNMENT

3.2.7.2.3.1 CONSTRUCTION IMPACTS

No Impact. No state-designated scenic highways or eligible state scenic highways are located within the LUs of the KNE La Brea Alignment. As a result, construction of the alignment would not damage any scenic resources (e.g., trees, rock outcroppings, or historic buildings) within a state-designated or eligible scenic highway. Therefore, the KNE La Brea Alignment would have no impact during construction.

3.2.7.2.3.2 OPERATIONAL IMPACTS

No Impact. Operation of the KNE La Brea Alignment would not result in impacts to any scenic resources within a state-designated or eligible scenic highway. No state-designated or eligible scenic highways are within, or adjacent to, the alignment. Therefore, the KNE La Brea Alignment would have no impact during operation.

3.2.7.2.4 HOLLYWOOD BOWL DESIGN OPTION

3.2.7.2.4.1 CONSTRUCTION IMPACTS

No Impact. No state-designated scenic highways or eligible state scenic highways are located within the LU of the Hollywood Bowl Design Option. As a result, construction of the design option would not damage any scenic resources (e.g., trees, rock outcroppings, or historic buildings) within a state-designated or eligible scenic highway. Therefore, the Hollywood Bowl Design Option would have no impact during construction.

3.2.7.2.4.2 OPERATIONAL IMPACTS

No Impact. Operation of the Hollywood Bowl Design Option would not result in impacts to any scenic resources within a state-designated or eligible scenic highway. No state-designated or eligible scenic highways are within, or adjacent to, the design option. Therefore, the Hollywood Bowl Design Option would have no impact during operation.

3.2.7.2.5 MAINTENANCE AND STORAGE FACILITY

3.2.7.2.5.1 CONSTRUCTION IMPACTS

No Impact. No state-designated scenic highways or eligible state scenic highways are located within the LU of the MSF. As a result, construction of the MSF would not damage any scenic resources (e.g., trees, rock outcroppings, or historic buildings) within a state-designated or eligible scenic highway. Therefore, the MSF would have no impact during construction.

3.2.7.2.5.2 OPERATIONAL IMPACTS

No Impact. Operation of the MSF would not result in impacts to any scenic resources within a state-designated or eligible scenic highway. No state-designated or eligible scenic highways are within, or adjacent to, the MSF. Therefore, the MSF would have no impact during operation.

3.2.7.3 IMPACT AES-3: VISUAL CHARACTER

Impact AES-3: Would the project in a nonurbanized area substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

3.2.7.3.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.2.7.3.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. During construction of the KNE San Vicente–Fairfax Alignment, the visual character of the associated LUs would change temporarily from existing conditions. Construction activities would require equipment such as construction barriers, cranes, and trucks. However, construction activities would be temporary and intermittent and limited to the immediate area. In addition, the perimeter of construction staging areas would be fenced for a variety of purposes, including opaque fencing to screen views of the construction site and activities, security, and noise controls, and could incorporate artwork, Metro-branded designs, and/or community-relevant messaging. This would help minimize visual nuisance and ensure that the visual character and quality of the immediate area are not substantially degraded during construction.

Some residences may have private views of construction activities and equipment from windows. While residents would be highly sensitive to visual changes and would have a higher degree of personal investment in the project, visual impacts under CEQA significance thresholds are assessed based on changes to public views. As such, analysis of resident viewer groups is provided for informational purposes only because the CEQA Guidelines do not protect private views from residential properties.

People who drive, roll, or walk would primarily experience views of construction activities while traveling the roadways and sidewalks along and adjacent to the construction areas. In addition, those who drive, roll, or walk would have prolonged views while idling or waiting at traffic signals and signed intersections. However, motorists are considered to have a low sensitivity to any visual changes as they are likely passing through areas to reach other destinations and do not necessarily have a personal investment in the visual character or quality of the LUs.

Pedestrians, including people who roll or walk, would primarily experience views of construction activities while traveling along public sidewalks, bicycle lanes, near transit stations and stops, and near businesses adjacent to the construction areas. The change in the visual character during construction would be noticeable by these viewers. In addition, pedestrians are considered to have a moderate sensitivity to visual changes as they may be engaged in observing their surroundings.

While construction of this alignment would represent a temporary change in the visual and scenic quality and character within the alignment LUs, construction would be temporary and limited to the immediate area. In addition, construction staging areas and construction activities would be screened to reduce the visual nuisance of construction. Furthermore, construction activities would be consistent with the goals and objectives of relevant planning documents. Construction would not conflict with any regulations that govern scenic quality, nor would it substantially degrade the existing visual character or quality of public views within the associated LUs. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.2.7.3.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE San Vicente–Fairfax Alignment would primarily occur underground; however, aboveground features such as station plazas and station entrances would introduce new visual elements thereby modifying the existing visual character of the associated LUs.

Some residences may have private views of these new operational features from windows. While residents would be highly sensitive to visual changes and would have a higher degree of personal investment in the project, visual impacts under CEQA significance thresholds are assessed based on changes to public views. As such, analysis of resident viewer groups is provided for informational purposes only because the CEQA Guidelines do not protect private views from residential properties.

People who drive, roll, or walk would experience a visual change from the existing setting but would have a moderate to low sensitivity to the visual change. Some people may have less of a personal investment in the visual appearance of the LUs in this alignment depending on the duration of exposure, such as passing through the area on the way to another location, being in an idling vehicle, or waiting to cross at intersections. Pedestrians, including those who roll or walk, have a moderate sensitivity to visual changes as they may be engaged in observing their surroundings.

The operational features of this alignment, such as station plazas and entrances, would be at-grade facilities within an urbanized area and would be designed to integrate with the existing character of the surrounding land uses. The stations would be designed as pedestrian-friendly environments to promote a sense of place and enhance the area's visual unity. These aboveground features, including but not limited to design and use of stations, auxiliary facilities use, and new landscaping, would follow the Metro design guidelines, standards, and policies, including the MRDC, the Metro Art Program Policy, the Metro Tree Policy, the Metro Transfers Design Guide, and the Systemwide Station Design Standards. Furthermore, aboveground elements that would be located on properties outside of the public right-of-way (e.g., station plazas) would comply with applicable zoning and design requirements, including undergoing mandated design review where applicable and coordinating with local jurisdictions during preliminary and final design. Operation of this alignment would not conflict with any regulations that govern scenic quality, nor would it substantially degrade the existing visual character or quality of public views within the associated LUs. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.2.7.3.2 KNE FAIRFAX ALIGNMENT

3.2.7.3.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. During construction of the KNE Fairfax Alignment, the visual character of the associated LUs would change temporarily from existing conditions. Construction activities would require equipment such as construction barriers, cranes, and trucks. However, construction activities would be temporary and intermittent and limited to the immediate area. In addition, the perimeter of construction staging areas would be fenced for a variety of purposes, including opaque fencing to screen views of the construction site and activities, security, and noise controls, and could incorporate artwork, Metro-branded designs, and/or community-relevant messaging. This would help minimize visual nuisance and ensure that the visual character and quality of the immediate area are not substantially degraded during construction.

Some residences may have private views of construction activities and equipment from windows. While residents would be highly sensitive to visual changes and would have a higher degree of personal investment in the project, visual impacts under CEQA significance thresholds are assessed based on changes to public views. As such, analysis of resident viewer groups is provided for informational purposes only because the CEQA Guidelines do not protect private views from residential properties.

People who drive, roll, or walk would primarily experience views of construction activities while traveling the roadways and sidewalks along and adjacent to the construction areas. In addition, those who drive, roll, or walk would have prolonged views while idling or waiting at traffic signals and signed intersections. However, motorists are considered to have a low sensitivity to any visual changes as they are likely passing through areas to reach other destinations and do not necessarily have a personal investment in the visual character or quality of the LUs.

Pedestrians, including people who roll or walk, would primarily experience views of construction activities while traveling along public sidewalks, bicycle lanes, near transit stations and stops, and near businesses adjacent to the construction areas. The change in the visual character during construction would be noticeable by these viewers. In addition, pedestrians are considered to have a moderate sensitivity to visual changes as they may be engaged in observing their surroundings.

While construction of this alignment would represent a temporary change in the visual and scenic quality and character within the alignment LUs, construction would be temporary and limited to the immediate area. In addition, construction staging areas and construction activities would be screened to reduce the visual nuisance of construction. Furthermore, construction activities would be consistent with the goals and objectives of relevant planning documents. Construction would not conflict with any regulations that govern scenic quality, nor would it substantially degrade the existing visual character or quality of public views within the associated LUs. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.2.7.3.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE Fairfax Alignment would primarily occur underground; however, aboveground features such as station plazas and station entrances would introduce new visual elements thereby modifying the existing visual character of the associated LUs.

Some residences may have private views of these new operational features from windows. While residents would be highly sensitive to visual changes and would have a higher degree of personal investment in the project, visual impacts under CEQA significance thresholds are assessed based on changes to public views. As such, analysis of resident viewer groups is provided for informational purposes only because the CEQA Guidelines do not protect private views from residential properties.

People who drive, roll, or walk would experience a visual change from the existing setting but would have a moderate to low sensitivity to the visual change. Some people may have less of a personal investment in the visual appearance of the LUs in this alignment depending on the duration of exposure, such as passing through the area on the way to another location, being in an idling vehicle, or waiting to cross at intersections. Pedestrians, including those who roll or walk, have a moderate sensitivity to visual changes as they may be engaged in observing their surroundings.

The operational features of this alignment, such as station plazas and entrances, would be at-grade facilities within an urbanized area and would be designed to integrate with the existing character of the surrounding land uses. The stations would be designed as pedestrian-friendly environments to promote a sense of place and enhance the area's visual unity. These aboveground features, including but not limited to design and use of stations, auxiliary facilities use, and new landscaping, would follow the Metro design guidelines, standards, and policies, including the MRDC, the Metro Art Program Policy, the Metro Tree Policy, the Metro Transfers Design Guide, and the Systemwide Station Design Standards. Furthermore, aboveground elements that would be located on properties outside of the public right-of-way (e.g., station plazas) would comply with applicable zoning and design requirements, including undergoing mandated design review where applicable and coordinating with local jurisdictions during preliminary and final design. Operation of this alignment would not conflict with any regulations that govern scenic quality, nor would it substantially degrade the existing visual character or quality of public views within the associated LUs. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.2.7.3.3 KNE LA BREA ALIGNMENT

3.2.7.3.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. During construction of the KNE La Brea Alignment, the visual character of the associated LUs would change temporarily from existing conditions. Construction activities would require equipment such as construction barriers, cranes, and trucks. However, construction activities would be temporary and intermittent and limited to the immediate area. In addition, the perimeter of construction staging areas would be fenced for a variety of purposes, including opaque fencing to screen views of the construction site and activities, security, and noise controls, and could incorporate artwork, Metro-branded designs, and/or community-relevant messaging. This would help minimize visual nuisance

and ensure that the visual character and quality of the immediate area are not substantially degraded during construction.

Some residences may have private views of construction activities and equipment from windows. While residents would be highly sensitive to visual changes and would have a higher degree of personal investment in the project, visual impacts under CEQA significance thresholds are assessed based on changes to public views. As such, analysis of resident viewer groups is provided for informational purposes only because the CEQA Guidelines do not protect private views from residential properties.

People who drive, roll, or walk would primarily experience views of construction activities while traveling the roadways and sidewalks along and adjacent to the construction areas. In addition, those who drive, roll, or walk would have prolonged views while idling or waiting at traffic signals and signed intersections. However, motorists are considered to have a low sensitivity to any visual changes as they are likely passing through areas to reach other destinations and do not necessarily have a personal investment in the visual character or quality of the LUs.

Pedestrians, including people who roll or walk, would primarily experience views of construction activities while traveling along public sidewalks, bicycle lanes, near transit stations and stops, and near businesses adjacent to the construction areas. The change in the visual character during construction would be noticeable by these viewers. In addition, pedestrians are considered to have a moderate sensitivity to visual changes as they may be engaged in observing their surroundings.

While construction of this alignment would represent a temporary change in the visual and scenic quality and character within the alignment LUs, construction would be temporary and limited to the immediate area. In addition, construction staging areas and construction activities would be screened to reduce the visual nuisance of construction. Furthermore, construction activities would be consistent with the goals and objectives of relevant planning documents. Construction would not conflict with any regulations that govern scenic quality, nor would it substantially degrade the existing visual character or quality of public views within the associated LUs. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.2.7.3.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE La Brea Alignment would primarily occur underground; however, aboveground features such as station plazas and station entrances would introduce new visual elements thereby modifying the existing visual character of the associated LUs.

Some residences may have private views of these new operational features from windows. While residents would be highly sensitive to visual changes and would have a higher degree of personal investment in the project, visual impacts under CEQA significance thresholds are assessed based on changes to public views. As such, analysis of resident viewer groups is provided for informational purposes only because the CEQA Guidelines do not protect private views from residential properties.

People who drive, roll, or walk would experience a visual change from the existing setting but would have a moderate to low sensitivity to the visual change. Some people may have less of a personal investment in the visual appearance of the LUs in this alignment depending on the duration of exposure, such as

passing through the area on the way to another location, being in an idling vehicle, or waiting to cross at intersections. Pedestrians, including those who roll or walk, have a moderate sensitivity to visual changes as they may be engaged in observing their surroundings.

The operational features of this alignment, such as station plazas and entrances, would be at-grade facilities within an urbanized area and would be designed to integrate with the existing character of the surrounding land uses. The stations would be designed as pedestrian-friendly environments to promote a sense of place and enhance the area's visual unity. These aboveground features, including but not limited to design and use of stations, auxiliary facilities use, and new landscaping, would follow the Metro design guidelines, standards, and policies, including the MRDC, the Metro Art Program Policy, the Metro Tree Policy, the Metro Transfers Design Guide, and the Systemwide Station Design Standards. Furthermore, aboveground elements that would be located on properties outside of the public right-of-way (e.g., station plazas) would comply with applicable zoning and design requirements, including undergoing mandated design review where applicable and coordinating with local jurisdictions during preliminary and final design. Operation of this alignment would not conflict with any regulations that govern scenic quality, nor would it substantially degrade the existing visual character or quality of public views within the associated LUs. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.2.7.3.4 HOLLYWOOD BOWL DESIGN OPTION

3.2.7.3.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. During construction of the Hollywood Bowl Design Option, the visual character of LU-12 (Hollywood Bowl) would change temporarily from existing conditions. Construction activities would require equipment such as construction barriers, cranes, and trucks. However, construction activities would be temporary and intermittent and limited to the immediate area. In addition, the perimeter of construction staging areas would be fenced for a variety of purposes, including opaque fencing to screen views of the construction site and activities, security, and noise controls, and could incorporate artwork, Metro-branded designs, and/or community-relevant messaging. This would help minimize visual nuisance and ensure that the visual character and quality of the immediate area are not substantially degraded during construction.

Some residences may have private views of construction activities and equipment from windows. While residents would be highly sensitive to visual changes and would have a higher degree of personal investment in the project, visual impacts under CEQA significance thresholds are assessed based on changes to public views. As such, analysis of resident viewer groups is provided for informational purposes only because the CEQA Guidelines do not protect private views from residential properties.

People who drive, roll, or walk would primarily experience views of construction activities while traveling the roadways and sidewalks along and adjacent to the construction areas. In addition, those who drive, roll, or walk would have prolonged views while idling or waiting at traffic signals and signed intersections. However, Highland Avenue in this LU is primarily a transit corridor for people attending events at the Hollywood Bowl, and for connecting Hollywood to Interstate 101 through Cahuenga Pass and for access

to the surrounding hillside residential areas. Those who drive, roll, or walk would have prolonged views while idling or waiting at traffic signals and signed intersections. Motorists are considered to have a low sensitivity to any visual changes as they are likely passing through areas to reach other destinations and do not necessarily have a personal investment in the visual character or quality of the LUs.

Pedestrians, including people who roll or walk, would primarily experience views of construction activities while traveling the roadways and sidewalks along and adjacent to the construction areas. The change in the visual character during construction would be noticeable by these viewers. In addition, pedestrians are considered to have a moderate sensitivity to visual changes as they may be engaged in observing their surroundings.

While construction of this design option would represent a temporary change in the visual and scenic quality and character within LU-12, construction would be temporary and limited to the immediate area. In addition, construction staging areas and construction activities would be screened to reduce the visual nuisance of construction. Furthermore, construction activities would be consistent with the goals and objectives of relevant planning documents. Construction would not conflict with any regulations that govern scenic quality, nor would it substantially degrade the existing visual character or quality of public views within the LU. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.2.7.3.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the Hollywood Bowl Design Option would primarily occur underground; however, aboveground features such as station plazas and station entrances would introduce new visual elements, thereby modifying the existing visual character of LU-12 (Hollywood Bowl).

Some residences may have private views of these new operational features from windows. While residents would be highly sensitive to visual changes and would have a higher degree of personal investment in the project, visual impacts under CEQA significance thresholds are assessed based on changes to public views. As such, analysis of resident viewer groups is provided for informational purposes only because the CEQA Guidelines do not protect private views from residential properties.

People who drive, roll, or walk would experience a visual change from the existing setting but would have a moderate to low sensitivity to the visual change. Some people may have less of a personal investment in the visual appearance of LU-12 depending on the duration of exposure, such as passing through the area on the way to another location, being in an idling vehicle, or waiting to cross at intersections. Pedestrians, including those who roll or walk, have a moderate sensitivity to visual changes as they may be engaged in observing their surroundings.

The operational features of the design option, such as station plazas and entrances, would be at-grade facilities within an urbanized area and would be designed to integrate with the existing character of the surrounding land uses. The station would be designed as pedestrian-friendly environments to promote a sense of place and enhance the area's visual unity. These aboveground features, including but not limited to design and use of the station, auxiliary facilities use, and new landscaping, would follow the Metro

design guidelines, standards, and policies, including the MRDC, the Metro Art Program Policy, the Metro Tree Policy, the Metro Transfers Design Guide, and the Systemwide Station Design Standards. Furthermore, aboveground elements that would be located on properties outside of the public right-of-way (e.g., station plazas) would comply with applicable zoning and design requirements, including undergoing mandated design review where applicable and coordinating with local jurisdictions during preliminary and final design. Operation of the design option would not conflict with any regulations that govern scenic quality, nor would it substantially degrade the existing visual character or quality of public views within the associated LU. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.2.7.3.5 MAINTENANCE AND STORAGE FACILITY

3.2.7.3.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the MSF would comply with applicable regulations governing scenic quality and would occur in a highly industrial area; no residences are immediately adjacent to the proposed MSF. Construction activities, while a temporary visual nuisance, would not be visible to any residential or visually sensitive uses.

People who drive, roll, or walk would primarily experience views of construction activities while traveling the roadways and sidewalks along and adjacent to construction areas. Those who drive, roll, or walk would have prolonged views while idling or waiting at traffic signals and signed intersections. However, motorists are considered to have a low sensitivity to any visual changes as they are likely passing through areas to reach other destinations and do not necessarily have a personal investment in the visual character or quality of an area.

Pedestrians, including people who roll or walk, would primarily experience views of construction activities while traveling along public sidewalks, bicycle lanes, and near businesses adjacent to construction areas. The change in the visual character during construction would be noticeable by these viewers. In addition, pedestrians are considered to have a moderate sensitivity to visual changes as they may be engaged in observing their surroundings. However, the visual character of LU-13 is primarily commercial and industrial with limited scenic elements aside from street trees and streetscapes.

While construction of the MSF would represent a temporary change in the visual and scenic quality and character, construction would be temporary and limited to the immediate area. In addition, construction staging areas and construction activities would be screened, and artwork, Metro-branded designs, and community-relevant messaging could be incorporated to reduce the visual nuisance of construction. Furthermore, construction activities would be consistent with the goals and objectives of relevant planning documents. Construction would not conflict with any regulations that govern scenic quality nor would it substantially degrade the existing visual character or quality of public views. Therefore, the MSF would have a less than significant impact during construction.

3.2.7.3.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the MSF would occur within an area of existing industrial land uses and would thus be aesthetically compatible with the existing industrial setting. The physical perimeter would not encroach onto public right-of-way. No substantial change in visual character or quality would occur. Additionally, the operational activities occurring within the MSF would follow the MRDC, which require projects to be designed in a manner that appropriately considers the existing urban context in which they are located. Operation of the MSF would adhere to applicable zoning ordinances governing scenic quality in an urban area. Therefore, the MSF would have a less than significant impact during operations.

3.2.7.4 IMPACT AES-4: LIGHT AND GLARE

Impact AES-4: Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

3.2.7.4.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.2.7.4.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The area in the vicinity of the KNE San Vicente–Fairfax Alignment currently has various sources of light and experiences a high level of existing ambient light consistent with developed, urbanized areas. There are currently sources of light at the proposed station locations. Construction of the alignment and stations would primarily occur during daytime hours (primarily due to construction noise restrictions on work hours, depending on jurisdiction). Construction activities may include, but are not limited to, tunneling, stockpiling and moving materials, and operation of construction equipment. Metro may seek nighttime work variances for construction involving the TBM, which would require nighttime construction lighting. Project measure PM AES-1 ensures safety and security lighting would be included during construction but would be directed toward the construction staging areas and/or shielded with temporary screening to minimize light spillover and glare onto adjacent areas. Any nighttime construction required for this alignment and stations would not be a substantial source of light and glare because several nighttime lighting sources already exist around the construction areas (e.g., streetlights, building illumination). As a result, the additional nighttime lighting would not substantially increase the amount of light in the area. In addition, construction activities would be localized, short-term, and intermittent. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.2.7.4.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. During operation of the KNE San Vicente–Fairfax Alignment, new nighttime light would primarily emanate from the station areas (e.g., station plazas, entryways, platforms) but would not substantially increase the amount of lighting in the immediate area because similar light sources and levels (e.g., buildings, streetlights) currently exist in the area. Light from headlights of the light rail transit vehicles is not expected to extend beyond the public transportation-related right-of-way because the vehicles would be below ground. The project would comply with the MRDC and Metro's

Systemwide Station Design Standards Policy. Compliance with these requirements would ensure that permanent operations-related light sources at the station areas would be directed downward or feature directional shielding to minimize spillover onto adjacent properties, including residential uses and other light-sensitive uses. Additionally, this alignment would include several elements (e.g., glass or metal surfaces) that could create new sources of glare at the station areas during the day. However, the project would comply with Metro design criteria and standards, which require low-glare finished surfaces. For these reasons, operation of the alignment and stations would create a negligible addition to light and glare and would not constitute a substantial change in existing light and glare in the immediate area. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.2.7.4.2 KNE FAIRFAX ALIGNMENT

3.2.7.4.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The area in the vicinity of the KNE Fairfax Alignment currently has various sources of light and experiences a high level of existing ambient light consistent with developed, urbanized areas. There are currently sources of light at the proposed station locations. Construction of the alignment and stations would primarily occur during daytime hours (primarily due to construction noise restrictions on work hours, depending on jurisdiction). Construction activities may include, but are not limited to, tunneling, stockpiling and moving materials, and operating construction equipment. Metro may seek nighttime work variances for construction involving the TBM, which would require nighttime construction lighting. Project measure PM AES-1 ensures safety and security lighting would be included during construction, but it would be directed toward the construction staging areas and/or shielded with temporary screening to minimize light spillover and glare onto adjacent areas. Any nighttime construction required for this alignment and stations would not be a substantial source of light and glare because several nighttime lighting sources already exist around the construction areas (e.g., streetlights, building illumination). As a result, the additional nighttime lighting would not substantially increase the amount of light in the area. In addition, construction activities would be localized, short-term, and intermittent. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.2.7.4.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. During operation of the KNE Fairfax Alignment, new nighttime light would primarily emanate from the station areas (e.g., station plazas, entryways, platforms) but would not substantially increase the amount of lighting in the immediate area because similar light sources and levels (e.g., buildings, streetlights) currently exist in the area. Light from headlights of the light rail transit vehicles is not expected to extend beyond the public transportation-related right-of-way because the vehicles would be below ground. The project would comply with the MRDC and Metro's Systemwide Station Design Standards Policy. Compliance with these requirements would ensure that permanent operations-related light sources at the station areas would be directed downward or feature directional shielding to minimize spillover onto adjacent properties, including residential uses and other light-sensitive uses. Additionally, this alignment would include several elements (e.g., glass or metal surfaces) that could create new sources of glare at the station areas during the day. However, the project would

comply with Metro design criteria and standards, which require low-glare finished surfaces. For these reasons, operation of the alignment and stations would create a negligible addition to light and glare and would not constitute a substantial change in existing light and glare in the immediate area. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.2.7.4.3 KNE LA BREA ALIGNMENT

3.2.7.4.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The area in the vicinity of the KNE La Brea Alignment currently has various sources of light and experiences a high level of existing ambient light consistent with developed, urbanized areas. There are currently sources of light at the proposed station locations. Construction of the alignment and stations would primarily occur during daytime hours (primarily due to construction noise restrictions on work hours, depending on jurisdiction). Construction activities may include, but are not limited to, tunneling, stockpiling and moving materials, and operating construction equipment. Metro may seek nighttime work variances for construction involving the TBM, which would require nighttime construction lighting. Project measure PM AES-1 ensures safety and security lighting would be included during construction, but it would be directed toward the construction staging areas and/or shielded with temporary screening to minimize light spillover and glare onto adjacent areas. Any nighttime construction required for this alignment and stations would not be a substantial source of light and glare because several nighttime lighting sources already exist around the construction areas (e.g., streetlights, building illumination). As a result, the additional nighttime lighting would not substantially increase the amount of light in the area. In addition, construction activities would be localized, short-term, and intermittent. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.2.7.4.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. During operation of the KNE La Brea Alignment, new nighttime light would primarily emanate from the station areas (e.g., station plazas, entryways, platforms) but would not substantially increase the amount of lighting in the immediate area because similar light sources and levels (e.g., buildings, streetlights) currently exist in the area. Light from headlights of the light rail transit vehicles is not expected to extend beyond the public transportation-related right-of-way because the vehicles would be below ground. The project would comply with the MRDC and Metro's Systemwide Station Design Standards Policy. Compliance with these requirements would ensure that permanent operations-related light sources at the station areas would be directed downward or feature directional shielding to minimize spillover onto adjacent properties, including residential uses and other light-sensitive uses. Additionally, this alignment would include several elements (e.g., glass or metal surfaces) that could create new sources of glare at the station areas during the day. However, the project would comply with Metro design criteria and standards, which require low-glare finished surfaces. For these reasons, operation of the alignment and stations would create a negligible addition to light and glare and would not constitute a substantial change in existing light and glare in the immediate area. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.2.7.4.4 HOLLYWOOD BOWL DESIGN OPTION

3.2.7.4.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The area in the vicinity of the Hollywood Bowl Design Option currently has various sources of light and experiences a high level of existing ambient light consistent with developed, urbanized areas. There are currently sources of light at the proposed station location. Construction of the design option and station would primarily occur during daytime hours (primarily due to construction noise restrictions on work hours, depending on jurisdiction). Construction activities may include, but are not limited to, tunneling, stockpiling and moving materials, and operating construction equipment. Metro may seek nighttime work variances for construction involving the sequential excavation method, which would require nighttime construction lighting. Project measure PM AES-1 ensures safety and security lighting would be included during construction, but it would be directed toward the construction staging areas and/or shielded with temporary screening to minimize light spillover and glare onto adjacent areas. Any nighttime construction required for the design option and station would not be a substantial source of light and glare because several nighttime lighting sources already exist around the construction areas (e.g., streetlights, building illumination). As a result, the additional nighttime lighting would not substantially increase the amount of light in the area. In addition, construction activities would be localized, short-term, and intermittent. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.2.7.4.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. During operation of the Hollywood Bowl Design Option, new nighttime light would primarily emanate from the station area (e.g., station plaza, entryways, platforms) but would not substantially increase the amount of lighting in the immediate area because similar light sources and levels (e.g., buildings, streetlights) currently exist in the area. Light from headlights of the light rail transit vehicles is not expected to extend beyond the public transportation-related right-of-way because the vehicles would be below ground. The project would comply with the MRDC and Metro's Systemwide Station Design Standards Policy. Compliance with these requirements would ensure that permanent operations-related light sources at the station areas would be directed downward or feature directional shielding to minimize spillover onto adjacent properties, including residential uses and other light-sensitive uses. Additionally, the design option would include several elements (e.g., glass or metal surfaces) that could create new sources of glare at the station area during the day. However, the project would comply with Metro design criteria and standards, which require low-glare finished surfaces. For these reasons, operation of the design option and station would create a negligible addition to light and glare and would not constitute a substantial change in existing light and glare in the immediate area. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.2.7.4.5 MAINTENANCE AND STORAGE FACILITY

3.2.7.4.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The area in the vicinity of the MSF currently has various sources of light and experiences a high level of existing ambient light consistent with developed, urbanized areas. Construction of the MSF would primarily occur during daytime hours. Construction activities may include, but are not limited to, stockpiling and moving materials, and operating construction equipment. Metro may seek nighttime work variances for construction, which would require nighttime construction lighting. Project measure PM AES-1 ensures safety and security lighting would be included during construction, but it would be directed toward the construction staging areas and/or shielded with temporary screening to minimize light spillover and glare onto adjacent areas. Any nighttime construction required for the MSF would not be a substantial source of light and glare because several nighttime lighting sources already exist around the construction areas (e.g., streetlights, building illumination). As a result, the additional nighttime lighting would not substantially increase the amount of light in the area. In addition, construction activities would be localized, short-term, and intermittent. Therefore, the MSF would have a less than significant impact during construction.

3.2.7.4.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. The MSF would be lit to provide sufficient illumination for operations and maintenance activities and to ensure a safe environment on a 24-hour basis. Metro design criteria and standards would require additional new light sources (e.g., security lighting and mounted yard light fixtures) to be directed toward the MSF and shielded from the surrounding areas. Additionally, the MSF does not include the use of materials that would be a substantial source of glare. Any light and glare associated with the MSF would be a negligible addition to existing light and glare because the adjacent areas are industrial, with similar light intensity and conditions. Therefore, operation of the MSF would have a less than significant impact related to light and glare.

3.2.7.5 MITIGATION MEASURES

As the impact analysis above demonstrates, construction and operation of any of the KNE alignments and stations, the design option, and the MSF would result in no impact or a less than significant impact related to aesthetics. Therefore, no mitigation is required under CEQA.

3.2.7.6 SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

Table 3.2-1 summarizes the aesthetics impact significance conclusions and, if applicable, mitigation measures. As indicated above, there are no significant impacts that would require mitigation.

TABLE 3.2-1. KNE SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

IMPACT		IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES				
		KNE SAN VICENTE–FAIRFAX ALIGNMENT	KNE FAIRFAX ALIGNMENT	KNE LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MAINTENANCE AND STORAGE FACILITY
Impact AES-1: Scenic Vistas	Impact Before Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact
Impact AES-2: Scenic Highways	Impact Before Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact
Impact AES-3: Visual Character	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS. Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS. Operation: LTS	Construction: LTS Operation: LTS
Impact AES-4: Light and Glare	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS

Source: Connect Los Angeles Partners 2024
LTS = less than significant

3.3 AIR QUALITY

3.3.1 INTRODUCTION

This discussion provides an evaluation of K Line Northern Extension (KNE) as it relates to air quality. It includes descriptions of the federal, state, and local regulatory setting, existing conditions, and the impacts from construction and operation of the proposed alignments and stations, design option, and maintenance and storage facility (MSF), as well as mitigation measures where applicable. For more detailed information, refer to the KNE Air Quality Technical Report (Appendix 3.3-A).

3.3.2 REGULATORY FRAMEWORK

3.3.2.1 FEDERAL

The Federal Clean Air Act (CAA), first enacted in 1955, governs air quality at the national level. The U.S. Environmental Protection Agency (USEPA) is responsible for implementing the CAA and regulating emission sources, such as aircraft, ships, and certain types of locomotives, under the exclusive authority of the federal government. The USEPA also has jurisdiction over emission sources outside state waters (e.g., beyond the outer continental shelf) and establishes various emission standards, including those for vehicles.

The Clean Air Act Amendments of 1990 direct the USEPA to implement environmental policies and regulations that will ensure acceptable levels of air quality. Under the Clean Air Act Amendments, a project cannot:

- Cause or contribute to any new violation of any National Ambient Air Quality Standards (NAAQS) in any area
- Increase the frequency or severity of any existing violation of any NAAQS in any area
- Delay timely attainment of any NAAQS or any required interim emission reductions or other milestones in any area

As required by the CAA, the USEPA has established NAAQS for six major air pollutants. These pollutants are carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM_{10} and $PM_{2.5}$),[1] sulfur dioxide (SO_2), and lead (Pb).

The NAAQS are summarized in Table 3.3-1. The “primary” standards in the table have been established to protect public health. The “secondary” standards are intended to protect the nation’s welfare and account for air pollutant effects on soil, water, visibility, materials, vegetation, and other aspects of the general welfare.

[1] Particulate matter (PM) smaller than or equal to 10 microns (PM_{10}) or 2.5 microns ($PM_{2.5}$) in diameter

TABLE 3.3-1. STATE AND FEDERAL AIR QUALITY STANDARDS

Ambient Air Quality Standards						
Pollutant	**Averaging Time**	**California Standards** [1]		**National Standards** [2]		
		Concentration [3]	**Method** [4]	**Primary** [3,5]	**Secondary** [3,6]	**Method** [7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[11]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[11]	—	
Lead[12,13]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	**No National Standards**		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

See footnotes on next page …

For more information please call ARB-PIO at (916) 322-2990 — California Air Resources Board (5/4/16)

Source: CARB 2016

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.

8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

For more information please call ARB-PIO at (916) 322-2990 **California Air Resources Board (5/4/16)**

Source: CARB 2016

3.3.2.2 STATE

3.3.2.2.1 CALIFORNIA AIR RESOURCES BOARD

Pollutants that degrade air quality in California are also subject to the requirements of the California Clean Air Act (CCAA). The CCAA, as amended in 1992, requires all air quality management districts in the state to endeavor to achieve and maintain State Ambient Air Quality Standards.

The California Air Resources Board (CARB), which became part of the California Environmental Protection Agency in 1991, is responsible for ensuring implementation of the CCAA and meeting state requirements of the CAA. It is also responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. CARB also established passenger vehicle fuel specifications. Automobiles sold in California must meet the stricter emission standards established by CARB. CARB also oversees the functions of local air pollution control districts and air quality management districts, which in turn administer air quality activities at the regional and county level.

3.3.2.2.2 STATE AMBIENT AIR QUALITY STANDARDS

As required by the CCAA, CARB has also established ambient air quality standards, known as the California Ambient Air Quality Standards (CAAQS). These standards are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. The CAAQS are summarized in Table 3.3-1.

3.3.2.2.3 TOXIC AIR CONTAMINANT IDENTIFICATION AND CONTROL ACT

The Toxic Air Contaminant Identification and Control Act created California's program to reduce exposure to air toxics in 1983. Under the Toxic Air Contaminant Identification and Control Act, CARB is required to prioritize the identification and control of air toxics emissions by considering criteria relating to the risk of harm to public health when selecting substances for review. The Toxic Air Contaminant Identification and Control Act also requires CARB to use available information gathered from the Air Toxics Hot Spots Information and Assessment Act to include in the prioritization of compounds.

CARB classified particulate emissions from diesel-fueled engines (i.e., diesel particulate matter [DPM]) as toxic air contaminants (TACs) in August 1998 and continues to evaluate and develop specific statewide regulations targeting DPM emissions from diesel-fueled engines and vehicles. The goal of each regulation is to make diesel engines as clean as possible by establishing state-of-the-art technology requirements or emission standards to reduce DPM emissions.

3.3.2.2.4 ADVANCED CLEAN CARS PROGRAM

CARB's Advanced Clean Cars Program combines several regulations into one package, including the low-emission vehicle (LEV) criteria and greenhouse gas regulations and the zero-emission vehicle (ZEV) regulation. Advanced Clean Cars I was adopted in 2012, and Advanced Clean Cars II was adopted in 2022. These regulations rapidly scale down emissions of light-duty passenger cars, pickup trucks, and

sport utility vehicles and require an increased number of zero-emission vehicles to meet air quality and climate change emissions goals. In October 2023, staff launched a new effort to consider potential amendments to the Advanced Clean Cars II regulations, including updates to the tailpipe greenhouse gas emission standard and limited revisions to the LEV and ZEV regulations.

3.3.2.2.5 STATE IMPLEMENTATION PLAN AND TRANSPORTATION IMPROVEMENT PROGRAM

A Regional Transportation Plan (RTP) presents the transportation vision for the region and provides a long-term investment framework for addressing the region's transportation and related challenges. Under the Clean Air Act Amendments of 1990, proposed transportation projects must be derived from a long-range transportation plan or RTP that conforms with the state air quality plans as outlined in a State Implementation Plan (SIP). The SIP sets forth the state's strategies for achieving air quality standards. Projects must also be included in a Transportation Improvement Program that conforms with the SIP, and localized impacts from proposed projects must conform to state air quality plans in nonattainment and maintenance areas.

A metropolitan planning organization (MPO) is the designated local decision-making body that is responsible for carrying out the metropolitan transportation planning process for an urban area. The Southern California Association of Governments (SCAG) is the MPO for the six-county region that includes Los Angeles, Orange, Riverside, Ventura, San Bernardino, and Imperial Counties.

3.3.2.3 REGIONAL

The South Coast Air Quality Management District (SCAQMD) is responsible for monitoring air quality and planning, implementing, and enforcing programs designed to attain and maintain state and federal ambient air quality standards in the district. SCAQMD regulates stationary source emissions, including area sources and point sources, and certain mobile source emissions. SCAQMD is also responsible for establishing permitting requirements for stationary sources and ensuring that new, modified, or relocated stationary sources do not create net emissions increases and, therefore, are consistent with the region's air quality goals. SCAQMD has fulfilled this requirement by preparing a series of Air Quality Management Plans (AQMPs). SCAQMD enforces air quality rules and regulations through a variety of means, including inspections, educational or training programs, or fines, when necessary.

All projects in SCAQMD's jurisdiction are subject to SCAQMD rules and regulations, including, but not limited to, the following:

- Rule 401 Visible Emissions: Prohibits discharge of air emissions that results in a plume that is as dark as or darker than that designated No. 1 on the Ringelmann Chart by the United States Bureau of Mines for more than three minutes in any one hour.
- Rule 402 Nuisance: Prohibits the discharge of "such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of people or the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property."

- Rule 403 Fugitive Dust: Requires that future projects reduce the amount of particulate matter entrained in the ambient air as a result of fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions from any active operation, open storage pile, or disturbed surface area.
- Rule 1113 Architectural Coatings: Limits volatile organic compounds (VOC) in architectural coatings used within SCAQMD. These limits are application-specific and are updated as the availability of low-VOC products expands.
- Rule 1166 Volatile Organic Compound Emissions from Decontamination of Soil: Sets requirements to control the emission of VOC from excavating, grading, handling, and treating VOC-contaminated soil as a result of leakage from storage or transfer operations, accidental spillage, or other deposition.
- Rule 1168 Adhesive and Sealant Applications: Reduces emissions of VOCs, TACs, and stratospheric ozone-depleting compounds from the application of adhesives, adhesive primers, sealants, and sealant primers.
- Rule 1186 PM_{10} Emissions from Paved and Unpaved Roads, and Livestock Operations: Reduces the amount of particulate matter entrained in the ambient air as a result of vehicular travel on paved and unpaved public roads, and at livestock operations.
- Rule 1403 Asbestos Emissions from Demolition/Renovation Activities: Specifies work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials.
- Rule 1466 Control of Particulate Emissions from Soils with Toxic Air Contaminants: Minimizes the amount of off-site fugitive dust emissions containing toxic air contaminants by reducing particulate emissions in the ambient air as a result of earth-moving activities, including dredging, excavating, grading, earth-cutting and filling, loading, unloading, handling, mechanized land clearing, treating, stockpiling, transferring, and removing of soil that contains applicable toxic air contaminants, from applicable sites.
- Rule 1470 Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines: Sets requirements for owners, operators, sellers, or lessors of applicable stationary compression ignition engines.
- Regulation XIII New Source Review: Contains Rules 1300 through 1325, which set forth preconstruction review requirements for new, modified, or relocated facilities, to ensure that the operation of such facilities does not interfere with progress in attainment of the NAAQS and CAAQS, and that future growth within SCAQMD is not unnecessarily restricted. The specific air quality goal of this regulation is to achieve no net increases from new or modified permitted sources of nonattainment air contaminants or their precursors.

3.3.3 METHODOLOGY

3.3.3.1 CEQA METHODOLOGY

The purpose of this analysis is to evaluate the project against California Environmental Quality Act (CEQA) thresholds of significance as the basis for determining the level of impacts related to air quality.

3.3.3.1.1 CONSTRUCTION IMPACTS

3.3.3.1.1.1 REGIONAL EMISSIONS ANALYSIS

An assessment of the air quality construction impacts of the project was conducted using staging information, estimated construction schedule, and construction equipment usage details. Major construction activities for KNE would include surveys and preconstruction; tunnel construction; utility relocation and installation work; station, crossover, and connection box construction; storage track or MSF construction; street restoration; ventilation and emergency egress construction; systems installation and facilities, including trackbed, rail, overhead contact system, conduit, electrical substation, and communications and signaling construction; and construction of other ancillary facilities. During each phase of construction, emissions would be generated from heavy-duty construction equipment, worker travel to and from the project site, and material import and export using haul trucks, delivery trucks, and cement trucks.

This assessment used emission factors from the CARB model for off-road vehicle and equipment emissions (OFFROAD), as well as the CARB model for on-road vehicle emissions (EMission FACtor program, or EMFAC). For the off-road vehicles and equipment, OFFROAD2021 emission factors specific to the South Coast Air Basin (SCAB), along with project-specific information on pieces of equipment for each construction phase, were used. In addition, specific pieces of equipment are required to meet Tier 4 final emission standards, which are USEPA's most stringent emissions standards for engines. Tier 4 engines reduce nitrogen oxides (NO_x) and particulate matter emissions by over 90 percent as compared to older model engines. Tier 4 standards were modeled based on the procedures outlined in the California Emissions Estimator Model (CalEEMod) program.

Equipment that is being used for specific subsurface operations was modeled as Tier 2. Higher-tiered equipment has not been approved for use by the Mining Safety and Health Administration for specific subsurface operations.

Tier-specific emission rates were obtained from CalEEMod. Fleet average emission rates from CARB's OFFROAD2021 model for the SCAB were assumed to be representative for all other pieces of equipment. Emission rates for 2041, the first anticipated year of construction for any project element, were conservatively used to represent the fleet average equipment.

Worker commute, haul truck, delivery truck, and cement truck trip emissions factors were estimated using the EMFAC2021 (v.1.0.2) emission factor model for the Los Angeles County region, aggregated for all model years, all fuel types, and annual average for season in each of the calendar years from 2041 through 2050.

In addition to exhaust emissions from the construction equipment, fugitive dust emissions from dirt handling and re-entrained roadway dust were included in the emission burden analyses to present a full inventory of emission burdens generated by the project. Emissions from construction activities such as earth-moving activities (bulldozing, etc.), truck loading, and road dust were calculated using applicable formulas from USEPA's AP-42 (USEPA 2023a). Area-specific parameters, such as silt content, were taken from the CalEEMod program. Soil moisture content was updated to reflect the muck moisture content based on field data information.

In accordance with guidance from SCAQMD, the air quality assessment characterized the maximum daily emissions that would occur throughout construction of each section of the KNE alignment[2] and the MSF or Hollywood Bowl Design Option that would occur concurrently with that section. The analysis assumes that each KNE alignment section would be built sequentially, not concurrently; therefore, emissions have been presented separately. If concurrent construction is expected, further analysis will be needed to determine combined air quality impacts for KNE.

The maximum daily emissions represent a reasonably conservative estimate of the highest anticipated daily emissions based on detailed phasing and equipment information developed for the project. The estimated maximum daily values were compared to the SCAQMD air quality construction significance thresholds shown in Table 3.3-2 to determine if the project would meet or exceed these values.

Metro's Moving Beyond Sustainability Strategic Plan (MBSSP) and its updated Green Construction Policy require the use of renewable diesel fuel if reasonably available in the vicinity of the project. Emissions benefits associated with this measure were not included in the analysis because renewable diesel emits air pollutants at the same rate as traditional diesel fuel. Use of renewable diesel reduces emissions of greenhouse gases, which are discussed in Section 3.9, Greenhouse Gas Emissions.

[2] As discussed in Section 2.4.6, Construction Sections, of Chapter 2, KNE would be constructed in either two sections (for the KNE Fairfax and La Brea Alignments) or three sections (for the KNE San Vicente–Fairfax Alignment), referred to as Section 1, Section 2, and Section 3. Together these comprise KNE. MSF construction would occur as part of Sections 1 and 2. Hollywood Bowl Design Option construction would occur as part of Section 3 with the KNE San Vicente-Fairfax Alignment or Section 2 with the KNE Fairfax and La Brea Alignments. This report provides an analysis of KNE (i.e., completion of Section 1, Section 2, and Section 3).

TABLE 3.3-2. SCAQMD AIR QUALITY SIGNIFICANCE THRESHOLDS

South Coast AQMD Air Quality Significance Thresholds

Mass Daily Thresholds [a]		
Pollutant	**Construction**	**Operation**
NO_x	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
SO_x	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Toxic Air Contaminants (TACs), Odor, and GHG Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic & Acute Hazard Index ≥ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to South Coast AQMD Rule 402	
GHG	10,000 MT/yr CO_2eq for industrial facilities	
Ambient Air Quality Standards for Criteria Pollutants [b]		
NO_2 1-hour average annual arithmetic mean	South Coast AQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.18 ppm (state) 0.03 ppm (state) and 0.0534 ppm (federal)	
PM_{10} 24-hour average annual average	10.4 µg/m³ (construction)[c] & 2.5 µg/m³ (operation) 1.0 µg/m³	
$PM_{2.5}$ 24-hour average	10.4 µg/m³ (construction)[c] & 2.5 µg/m³ (operation)	
SO_2 1-hour average 24-hour average	0.25 ppm (state) & 0.075 ppm (federal – 99th percentile) 0.04 ppm (state)	
Sulfate 24-hour average	25 µg/m³ (state)	
CO 1-hour average 8-hour average	South Coast AQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) and 35 ppm (federal) 9.0 ppm (state/federal)	
Lead 30-day Average Rolling 3-month average	1.5 µg/m³ (state) 0.15 µg/m³ (federal)	

[a] Source: South Coast AQMD CEQA Handbook (South Coast AQMD, 1993)
[b] Ambient air quality thresholds for criteria pollutants based on South Coast AQMD Rule 1303, Table A-2 unless otherwise stated.
[c] Ambient air quality threshold based on South Coast AQMD Rule 403.

KEY: lbs/day = pounds per day ppm = parts per million µg/m³ = microgram per cubic meter ≥ = greater than or equal to
MT/yr CO_2eq = metric tons per year of CO_2 equivalents > = greater than

Revision: March 2023

Source: SCAQMD 2023

3.3.3.1.1.2 LOCALIZED POLLUTANT CONCENTRATIONS

Regional emissions refer to all emissions that would be associated with a project, while localized emissions refer to only those emissions that would be produced by sources located on the project site. Construction activities typically generate temporary localized emissions from heavy-duty construction equipment exhaust, fugitive dust (particulate matter) from material movement and ground disturbance, exhaust from on-road vehicle travel on-site, and on-road re-entrained dust and brake and tire wear from on-road vehicle travel on-site. These localized emissions have the potential to create high concentrations of air pollutants.

On-site criteria pollutant emissions from project construction were estimated following the methodology described above. SCAQMD's Final Localized Significance Threshold Methodology was used to assess localized criteria pollutant air quality impacts from construction of KNE (SCAQMD 2009). SCAQMD's Localized Significance Threshold (LST) Methodology divides the SCAB into 38 Source Receptor Areas (SRAs). KNE is located in SRA 2 – Northwest Coastal Los Angeles County. Appendix C of SCAQMD's LST Methodology presents LST tables for site sizes of one, two, and five acres. SCAQMD's example projects show linear interpolation of LSTs for site sizes of three and four acres; that approach was also used for the project.

In order to construct a station, a minimum of one to two acres of construction staging sites would be needed for the duration of the station construction period. A larger construction staging site of three to four acres would be required if the site is also used to launch the tunnel boring machines and support tunneling activities. Appendix 2-C, Construction Approach Report, provides the total size of all construction staging areas for each station used to select the appropriate LSTs for each site. While the total site size for the MSF (i.e., expansion of the existing Division 16 MSF on the adjacent site) would be 16.5 acres, it was assumed that a maximum of five acres would be disturbed per day, and LSTs for a five-acre site were used.

According to SCAQMD, land uses that constitute air quality sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. SCAQMD recommends that air quality assessments consider the potential localized impacts to sensitive receptors at distances up to 500 meters[3] (1,640 feet) from project sites, depending on the proximity of sensitive land uses. KNE is located in a developed urban setting near many land uses that qualify as sensitive receptors, including residential land uses, schools, and other institutional uses located along the alignment. To ensure a conservative analysis, the closest receptors were assumed to be within 25 meters (82 feet) of the station construction site boundaries, the minimum distance provided in the LST methodology. The MSF is located in an industrial area, and the closest sensitive receptors would be residences located 100 meters (328 feet) north of the site.

On-site use of diesel-fueled heavy-duty construction equipment and on-road trucks would also generate temporary localized TAC emissions in the form of DPM. Impacts to sensitive receptors from localized TAC emissions were assessed qualitatively.

[3] Distances are presented in metric units to match SCAQMD's LST Guidance and LST Thresholds Tables (Table 3.3-3 and Table 3.3-4).

3.3.3.1.1.3 OTHER EMISSIONS

Other construction emissions with the potential to adversely affect a substantial number of people include odors from diesel vehicle exhaust. Diesel vehicle exhaust has a distinctive odor that may be considered unpleasant to certain individuals. While unpleasant odors rarely cause physical harm, they can be considered a nuisance. SCAQMD Air Quality Significance Thresholds address odorous emissions by invoking compliance with SCAQMD Rule 402, which prohibits creation of a public nuisance affecting a considerable number of people. No quantitative threshold has been established for assessing potential odor impacts; therefore, impacts were assessed qualitatively.

3.3.3.1.2 OPERATIONAL IMPACTS

3.3.3.1.2.1 REGIONAL TRAFFIC EMISSIONS ANALYSIS

The regional emission burden analysis determines a project's overall impact on air quality levels. For KNE, an analysis was conducted based upon forecasted vehicle miles traveled (VMT) displaced due to transit use associated with the alignments and stations and operations associated with the MSF.

The regional traffic emissions analysis was conducted for the existing conditions baseline year of 2019, the 2045 without Project Conditions, and the 2045 with Project Conditions for each alignment. The Metro Corridor Based Model 2018c forecasts that the design option would not contribute to a meaningful change in regional VMT, and no additional emissions analyses were conducted. Emission factors were obtained from CARB's EMFAC2021 using parameters set within the program for SCAQMD, including the regional mix of vehicle types, vehicle age, and vehicle speeds. Light rail vehicles (LRVs) and lighting of proposed stations would be electrically powered and would not generate direct criteria pollutant emissions. Project emissions have been compared to the SCAQMD regional significance thresholds described below.

3.3.3.1.2.2 MSF OPERATIONS EMISSIONS ANALYSIS

Project activities associated with the MSF would occur in two parts, concurrent with Section 1 and Section 2 of each alignment. Concurrently with Section 1 of the alignments, MSF facility construction would include the addition of four storage tracks on the existing Division 16 site to accommodate increased LRV storage. Concurrently with Section 2 of the alignments, MSF facilities constructed would include expansion of the existing Division 16 MSF on the adjacent 16.5-acre site and comprise approximately 57,380 square feet of facility structures. No MSF construction would occur as part of Section 3 of the KNE San Vicente–Fairfax Alignment because the MSF would be completed as part of Section 2.

Operation of the MSF additions would result in criteria pollutant emissions from combustion of natural gas for heating and cooling and from activities required for maintenance and upkeep of the structures and LRVs. These emissions were quantified using default model parameters for the "warehouse with rail" land use type in the CalEEMod program with the following modeling parameters: region (Los Angeles sub-area of the SCAB), climate zone (9), utility (Southern California Edison), and size (approximately 57,380 square feet based on space needs estimates). MSF operations would also result in criteria pollutant

emissions from employee commute vehicles. Employee commute trips associated with operation of the MSF are included in the regional VMT projections used to evaluate the change in regional vehicle emissions resulting from KNE.

3.3.3.1.2.3 LOCALIZED POLLUTANT CONCENTRATIONS

Off-site operational criteria pollutant emission sources with the potential to result in substantial localized pollutant concentrations include exhaust from regional motor vehicle traffic and exhaust from employee commute vehicles associated with the MSF. Motor vehicle exhaust can cause elevated concentrations of CO; the highest CO concentrations are typically found close to congested roadways and intersections.

On-site criteria pollutant emission sources with the potential to result in substantial localized pollutant concentrations would be located at the MSF and would include heating and cooling activities that use natural gas and activities required for maintenance and upkeep of the structures and LRVs. LRVs and light rail station operations are electric and would not include any sources of criteria air pollutant emissions.

SCAQMD's Final LST methodology was used to assess localized air quality impacts from operational activities at the MSF (SCAQMD 2009). The MSF is located in SRA 2 – Northwest Coastal Los Angeles County. Appendix C of SCAQMD's LST Methodology presents LST tables for site sizes of one, two, and five acres. To ensure a conservative analysis, it was assumed that daily MSF operations would occur within active areas that are less than or equal to one acre in size. The MSF is located in an industrial area, and the closest sensitive receptors would be residences located 100 meters (328 feet) north of the site. Impacts to sensitive receptors from localized TAC emissions were assessed qualitatively.

3.3.3.1.2.4 OTHER EMISSIONS

Other operational emissions with the potential to adversely affect a substantial number of people include odors. While unpleasant odors rarely cause physical harm, they can be considered a nuisance. SCAQMD Air Quality Significance Thresholds address odorous emissions by invoking compliance with SCAQMD Rule 402, which prohibits creation of a public nuisance affecting a considerable number of people. No quantitative threshold has been established for assessing potential odor impacts; therefore, impacts were assessed qualitatively.

3.3.3.2 SIGNIFICANCE THRESHOLDS

In accordance with Appendix G of the 2022 CEQA Guidelines, the project would have a significant impact related to air quality if it would:

- Impact AQ-1: Conflict with or obstruct implementation of the applicable air quality plan.
- Impact AQ-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.
- Impact AQ-3: Expose sensitive receptors to substantial pollutant concentrations.
- Impact AQ-4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

In a CEQA analysis, project-related impacts are typically compared to existing (without project) conditions. However, pursuant to CEQA Guidelines Section 15125(a)(2), a Lead Agency has the discretion to exclusively use a future conditions baseline for the purposes of determination of significance under CEQA in instances where showing an existing conditions analysis would be misleading or without informational value. Use of an existing conditions baseline for the air quality analysis would be misleading for the project because it ignores the regional background growth in population, traffic, and transportation infrastructure that would occur between the 2019 existing conditions baseline year and the 2045 horizon year for the travel demand forecasting (i.e., the 2019 existing conditions will be substantially altered by regional growth that will occur independent of the project, which, in turn, would mask the impacts that are attributable to the project and would not provide an accurate and meaningful representation of project-related impacts).

Consideration of regional background growth is critical when determining future effects for transit projects designed to reduce traffic congestion and associated air quality impacts over time. Use of an existing conditions baseline would also be misleading based on the emissions reductions that will occur to meet vehicle emissions standards, fuel economy standards, market penetration of alternative fuels, and engine technology, as well as compliance with other climate action plan strategies. Isolating the project's impacts from other regional changes in the environment would result in a misleading analysis. Therefore, for the quantification of air quality emissions, project emissions will be defined as the difference between the project (2045) and the existing conditions in 2019 adjusted for regional growth (i.e., the projected future conditions baseline) that would occur by 2045. In this case, the projected future conditions baseline is the 2045 without Project Conditions.

SCAQMD is the agency given primary responsibility for developing plans, programs, rules, and regulations that will improve air quality in the SCAB. SCAQMD published CEQA significance thresholds and guidance for analyzing the significance of project air quality impacts in the CEQA Air Quality Handbook (SCAQMD 1993). Since the release of the CEQA Air Quality Handbook, additional guidance documents updating or adding to SCAQMD's CEQA Handbook have been published on the SCAQMD website. SCAQMD's current CEQA significance thresholds are presented in Table 3.3-2.

SCAQMD guidance recommends that air pollutant emissions be analyzed in both regional and local contexts. Regional emissions refer to all emissions that would be associated with construction and operation of a project (e.g., on-site and off-site), while localized emissions refer to only those emissions that would be produced by sources located on a project site. SCAQMD established regional maximum daily screening threshold values for air pollutant emissions from projects within the SCAB. The mass daily thresholds were developed to prevent the occurrence of air quality violations that would obstruct implementation of the AQMP and hinder efforts to improve regional air quality. In addition to regional significance thresholds, SCAQMD has developed localized concentration-based CEQA screening values for criteria pollutants. As discussed further in Section 3.3.5.1.3, since the SCAB is in nonattainment for PM_{10} and $PM_{2.5}$ under the CAAQS, the threshold is established as an incremental "allowable change" in concentration as a result of project implementation. Quantitative thresholds for determining impacts from TAC emissions have also been developed by SCAQMD. SCAQMD has not established quantitative thresholds for assessing impacts from odors.

SCAQMD has developed area-specific mass emission rate LSTs based on project location, project site size, and proximity of sensitive receptors to the project site. LSTs are only applicable to the following criteria pollutants: NOX, CO, PM10, and PM2.5. LST Mass Rate Look-Up Tables are provided in Appendix C to the SCAQMD Final Localized Significance Threshold Methodology and represent maximum allowable daily emissions from sources on the project site that will not result in the CAAQS being exceeded at sensitive receptor locations (SCAQMD 2009). KNE is located in SRA 2 – Northwest Coastal Los Angeles County. Construction and operation LSTs for SRA 2 are presented in Table 3.3-3 and Table 3.3-4, respectively.

TABLE 3.3-3. SCAQMD LOCALIZED SIGNIFICANCE THRESHOLDS – CONSTRUCTION

SOURCE RECEPTOR AREA	SITE SIZE (ACRES)	RECEPTOR DISTANCE (m)	(LBS/DAY)			
			CO	NO_X	PM_{10}	$PM_{2.5}$
2 (Northwest Coastal Los Angeles County)	≤1	25	562	103	4	3
		50	833	104	12	4
		100	1,233	121	27	8
		200	2,367	156	57	18
		500	7,724	245	146	77
	2	25	827	147	6	4
		50	1,213	143	19	5
		100	1,695	156	34	10
		200	2,961	186	64	21
		500	8,446	262	154	82
	5	25	1,531	221	13	6
		50	1,985	212	40	8
		100	2,762	226	55	14
		200	4,383	250	84	29
		500	10,467	312	174	95

Source: SCAQMD 2009
CO = carbon monoxide; lbs/day = pounds per day; NOx = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; m = meters; SCAQMD = South Coast Air Quality Management District

TABLE 3.3-4. SCAQMD LOCALIZED SIGNIFICANCE THRESHOLDS – OPERATION

SOURCE RECEPTOR AREA	SITE SIZE (ACRES)	RECEPTOR DISTANCE (m)	(LBS/DAY)			
			CO	NO_X	PM_{10}	$PM_{2.5}$
2 (Northwest Coastal Los Angeles County)	≤1	25	562	103	1	1
		50	833	104	3	1
		100	1,233	121	7	2
		200	2,367	156	14	5
		500	7,724	245	36	19
	2	25	827	147	2	1
		50	1,213	143	5	2
		100	1,695	156	9	3
		200	2,961	186	16	6
		500	8,446	262	37	20
	5	25	1,531	221	3	2
		50	1,985	212	10	2
		100	2,762	226	13	4
		200	4,383	250	21	7
		500	10,467	312	42	23

Source: SCAQMD 2009
CO = carbon monoxide; lbs/day = pounds per day; NOx = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; m = meters; SCAQMD = South Coast Air Quality Management District

The Governor's Office of Planning and Research (OPR) released technical advisories for the streamlined review of transportation projects under CEQA in 2018 and 2021 (OPR 2018, 2021). In these advisories, OPR acknowledges the benefits of certain types of transportation projects (including light rail projects) that would reduce VMT and recommends the streamlining of air emissions impact analyses for these projects because they would reduce transportation-related air emissions, improve and increase multimodal transportation networks, and facilitate mixed-use development. The OPR recommendation is based on programmatic review of public transit and active transportation projects, which consistently demonstrate reductions in pollutant emissions from on-road vehicles. The determination of operational air quality impacts is streamlined for the project, as it would not introduce a new substantial permanent source of air pollutant emissions and would induce changes to regional transportation patterns that would decrease VMT and associated air pollutant emissions.

3.3.4 RESOURCE STUDY AREA

The resource study area (RSA) for regional air quality impacts is defined as the SCAG region, which encompasses Los Angeles, Orange, Riverside, Ventura, San Bernardino, and Imperial Counties, as shown in Figure 3.3-1. Although the RSA is extensive, the analysis focused only on air quality emission sources that would affect or be affected by the project. Specifically, this report analyzes impacts within the SCAG region to capture the changes in traffic-related VMT that could occur as a direct result of the alignments as determined by the project traffic analysis (see Section 3.16, Transportation). The RSA applies to regional analysis of all alignments and stations, the design option, and the MSF.

The RSA for localized air quality impacts is the 500 meters (1,640 feet) around each station's construction site along the alignment and the MSF. The RSA is based on the SCAQMD Final LST methodology, which focuses on preventing near-source pollutant concentrations from reaching or exceeding NAAQS or CAAQS at sensitive receptor locations in close proximity to project sites.

3.3.5 EXISTING SETTING

This existing setting discussion summarizes current conditions related to air quality within and near the KNE RSA.

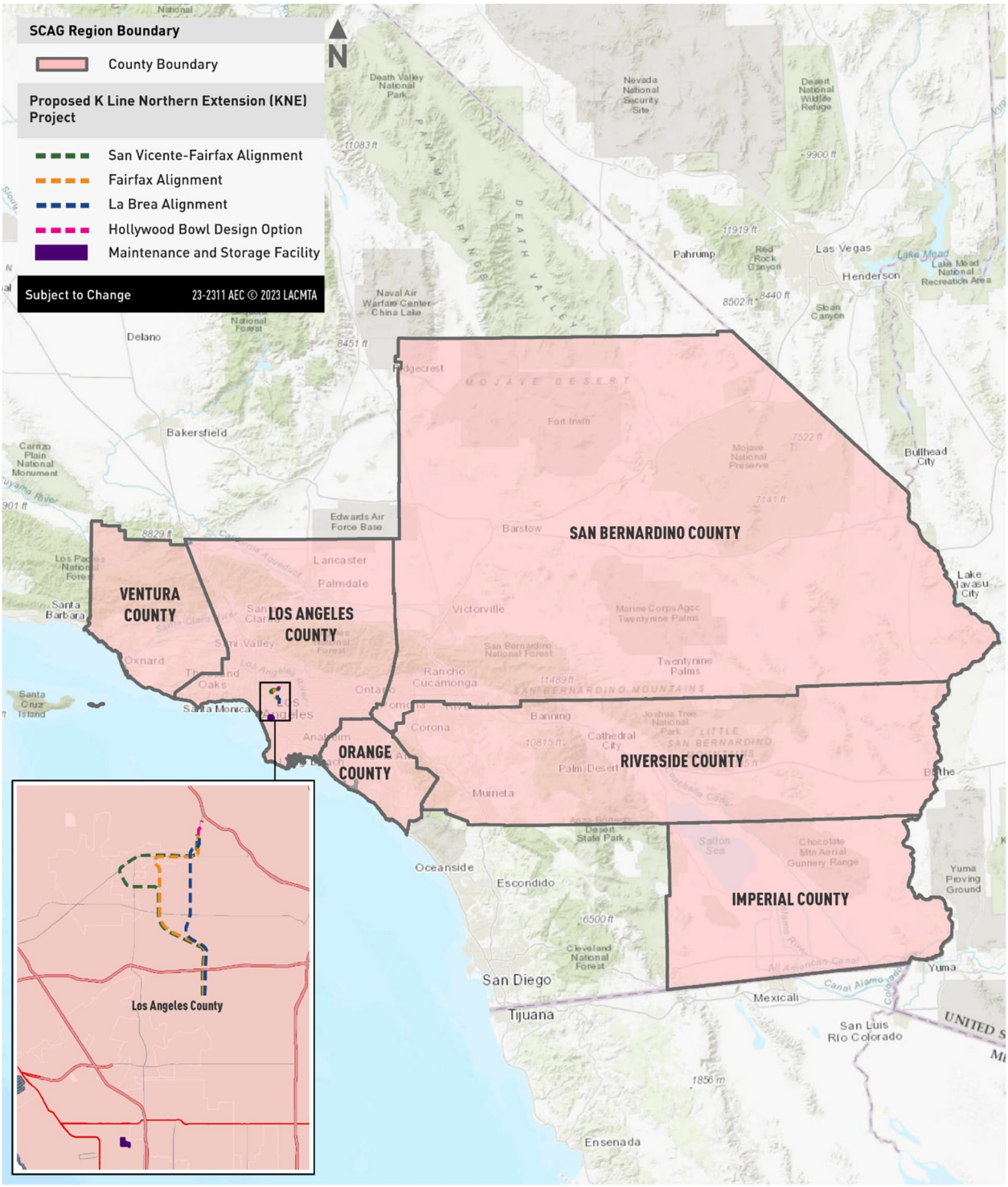
3.3.5.1 REGIONAL SETTING

3.3.5.1.1 POLLUTANT DESCRIPTIONS

Air pollutants relevant to the project include O_3, PM_{10}, $PM_{2.5}$, CO, NO_2, SO_2, and air toxics, particularly DPM. A brief description of these pollutants, their sources, and their effects on human health is provided below.

- **O_3:** O_3 is a colorless toxic gas found in both the Earth's upper and lower atmospheric levels. In the upper atmosphere, O_3 is a naturally occurring gas that helps to prevent the sun's harmful ultraviolet rays from reaching the Earth. In the lower layer of the atmosphere, O_3 is man-made and forms through a chemical reaction between hydrocarbons, also referred to as VOC or reactive organic gases, and NOx, which are emitted from industrial sources and from automobiles. Adverse effects on human health include respiratory function impairment.
- **PM_{10}:** PM_{10} refers to particulate matter less than or equal to 10 microns in diameter, about one-seventh the thickness of a human hair. PM_{10} pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Major sources of PM_{10} include motor vehicles; wood-burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. Adverse effects on human health include respiratory function impairment and aggravation of chronic respiratory conditions such as asthma.

FIGURE 3.3-1. REGIONAL RESOURCE STUDY AREA



Source: Connect Los Angeles Partners 2024

- **$PM_{2.5}$:** $PM_{2.5}$ refers to particulates that are 2.5 microns or less in diameter, roughly 1/28th the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (from motor vehicles, power generation, and industrial facilities), residential fireplaces, and wood stoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as SO_2, NO_X, and VOC. Like PM_{10}, $PM_{2.5}$ and can penetrate the human respiratory system's natural defenses and damage the respiratory tract when inhaled. Whereas particles 2.5 to 10 microns in diameter tend to collect in the upper portion of the respiratory system, particles 2.5 microns or less are so tiny that they can penetrate deeper into the lungs and damage lung tissues.
- **CO:** CO is a colorless gas that interferes with the transfer of oxygen to the brain. CO is emitted almost exclusively from the incomplete combustion of fossil fuels. On-road motor vehicle exhaust is the primary source of CO. In cities, 85 to 95 percent of all CO emissions may come from motor vehicle exhaust. Prolonged exposure to high levels of CO can cause headaches, drowsiness, loss of equilibrium, or heart disease.
- **NO_2:** NO_2 is a brownish gas that irritates the lungs. It can cause breathing difficulties at high concentrations. As with O_3, NO_2 is not directly emitted. It is formed through a reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO_2 are collectively referred to as NO_X and are major contributors to O_3 formation. NO_2 also contributes to the formation of PM_{10}. At atmospheric concentrations, NO_2 is only potentially irritating. In high concentrations, the result is a brownish red cast to the atmosphere and reduced visibility. There is some indication of a relationship between NO_2 and chronic pulmonary fibrosis. An increase in bronchitis in children (two and three years old) has also been observed at concentrations below 0.3 parts per million (ppm).
- **SO_2:** SO_2 is a product of high sulfur fuel combustion. The main sources of SO_2 are coal and oil used in power stations, industry, and domestic heating. Industrial chemical manufacturing is another source of SO_2. SO_2 is an irritant gas that can harm the human respiratory system and make breathing difficult. People with asthma, particularly children, are sensitive to these effects of SO_2. SO_2 can also yellow plant leaves and corrode iron and steel. Although diesel-fueled heavy-duty vehicles emit SO_2, USEPA and other regulatory agencies do not consider transportation sources to be significant sources of this pollutant.
- **Air Toxics:** A TAC is defined by California law as an air pollutant that "may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health."[4] The USEPA uses the term hazardous air pollutant in a similar sense and has identified nine compounds with significant contributions from mobile sources that are among national and regional-scale cancer risk drivers or contributors, as well as noncancer hazard contributors. These nine compounds are 1,3 butadiene, acetaldehyde, acrolein, benzene, DPM, ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter.
- **DPM:** DPM/diesel exhaust organic gases are a complex mixture of hundreds of constituents in either a gaseous or particle form. Gaseous components of diesel exhaust include carbon dioxide, oxygen, nitrogen, water vapor, CO, nitrogen compounds, sulfur compounds, and numerous low-

[4] California Health and Safety Code §39655(a).

molecular-weight hydrocarbons. DPM consists primarily of $PM_{2.5}$, including a subgroup with a large number of particles having a diameter less than 0.1 micrometer. Collectively, these particles have a large surface area, which makes them an excellent medium for adsorbing organic compounds. In addition, their small size makes them highly respirable and able to reach deep into the lungs. DPM is emitted from on-road mobile sources, such as automobiles and trucks, and from off-road mobile sources (e.g., diesel locomotives, marine vessels, and construction equipment). DPM is directly emitted from diesel-powered engines (primary PM) and can be formed from the gaseous compounds emitted by diesel engines (secondary PM).

Acute or short-term (e.g., episodic) exposure to diesel exhaust can cause acute irritation (e.g., eye, throat and bronchial), neurophysiological symptoms (e.g., lightheadedness and nausea), and respiratory symptoms (e.g., cough and phlegm). Evidence also exists for an exacerbation of allergenic responses to known allergens and asthma-like symptoms. Information from available human studies is inadequate for a definitive evaluation of possible noncancer health effects from chronic exposure to diesel exhaust. However, on the basis of extensive animal evidence, diesel exhaust is judged to pose a chronic respiratory hazard to humans. The USEPA has determined that diesel exhaust is likely to be carcinogenic to humans by inhalation and that this hazard applies to environmental exposures.

3.3.5.1.2 CLIMATE AND ATMOSPHERIC CONDITIONS

The surrounding atmosphere is an important element in assessing an area's ambient air quality. The project is located in the SCAB, an approximately 6,745-square-mile area that includes all of Orange County, the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, and the San Gorgonio Pass area in Riverside County. The terrain and geographical location determine the distinctive climate of the SCAB, which is a coastal plain with connecting broad valleys and low hills.

The SCAB is bordered by the Pacific Ocean to the west; the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east; and the San Diego County line to the south. Prevailing winds in the SCAB are mainly out of the west. These prevailing winds are due to the proximity of the SCAB to the coast and the blocking nature of the San Bernardino Mountains to the east; air masses pushed onshore into the basin are often trapped by the San Bernardino Mountains.

During summer, the SCAB is generally influenced by a Pacific subtropical high cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The SCAB is rarely influenced by cold air masses moving south from Canada and Alaska, since these frontal systems are weak and diffuse as they reach the basin. The SCAB is classified as a dry-hot desert climate.

3.3.5.1.3 ATTAINMENT STATUS

Section 107 of the 1977 Clean Air Act Amendment requires that the USEPA publish a list of all geographic areas in compliance with the NAAQS, plus those not attaining the NAAQS. Areas not in NAAQS compliance are deemed nonattainment areas. Areas that have insufficient data to make a determination are deemed unclassified and are treated as being attainment areas until proven otherwise. An area's designation is based on the data collected by the state monitoring network on a pollutant-by-pollutant basis.

The CCAA, signed into law in 1988, requires all areas of the state to achieve and maintain the CAAQS by the earliest practicable date. CAAQS are at least as stringent as, and often more stringent than, NAAQS. CARB also publishes a list of geographic areas in attainment or nonattainment with the CAAQS.

The project is located in Los Angeles County. As shown in Table 3.3-5, the USEPA has classified Los Angeles County as a federal nonattainment area for O_3 and $PM_{2.5}$, and a portion of the county is nonattainment for lead. Los Angeles County is listed as a maintenance area for CO and PM_{10}, as it was previously a nonattainment area for these pollutants. CARB has classified Los Angeles County as a state nonattainment area for O_3, PM_{10}, and $PM_{2.5}$.

TABLE 3.3-5. LOS ANGELES COUNTY ATTAINMENT STATUS

AIR POLLUTANT	FEDERAL ATTAINMENT STATUS	STATE ATTAINMENT STATUS
Carbon Monoxide (CO)	Maintenance	Attainment
Ozone (O_3)	Nonattainment	Nonattainment
Nitrogen Dioxide (NO_2)	Attainment	Attainment
Suspended Particulates (PM_{10})	Maintenance	Nonattainment
Suspended Particulates ($PM_{2.5}$)	Nonattainment	Nonattainment
Lead (Pb)	Nonattainment (Partial)	Attainment
Sulfur Dioxide (SO_2)	Attainment/Unclassified	Attainment

Sources: USEPA 2023b; CARB 2023a
PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter

3.3.5.1.4 LOCAL MONITORED AIR QUALITY

Air pollutant levels in the SCAB are measured at monitoring stations that CARB maintains. The two monitoring stations nearest the project are located in the City of Los Angeles at the West Los Angeles Veterans Hospital and 1630 North Main Street. The last three years of available monitored data (2020, 2021, and 2022) for these locations are summarized in Table 3.3-6 to illustrate general air quality trends.

3.3.5.1.5 APPLICABLE STATE IMPLEMENTATION PLAN AND TRANSPORTATION IMPROVEMENT PROGRAM

As described above, SCAG is the MPO responsible for carrying out the metropolitan transportation planning process for the SCAG region, which includes Los Angeles County. Every four years, SCAG updates Connect SoCal, its RTP/Sustainable Communities Strategy (SCS) that meets federal and state requirements for infrastructure and sustainable planning. The latest version of Connect SoCal is the 2020-2045 RTP/SCS, which was adopted in 2020 and proposes land use and transportation strategies to improve mobility options and achieve a more sustainable growth pattern (SCAG 2020).

TABLE 3.3-6. AIR QUALITY SUMMARY FOR NEARBY MONITORING STATIONS

AIR POLLUTANT	STANDARD/EXCEEDANCE*	NORTH MAIN STREET LOS ANGELES			VA HOSPITAL WEST LOS ANGELES		
		2020	2021	2022	2020	2021	2022
Carbon Monoxide (CO)	Max. 1-hour Concentration (ppm)	2.1	2.0	1.7	2.0	1.5	NM
	Max. 8-hour Concentration (ppm)	1.6	1.6	1.5	1.2	1.0	NM
	# Days>Federal 1-hour Std. of >35 ppm	0	0	0	0	0	NM
	# Days>Federal 8-hour Std. of >9 ppm	0	0	0	0	0	NM
Ozone (O_3)	Year Coverage – 1 hour/8 hour**	93/92	93/95	97/99	94/97	96/99	94/96
	Max. 1-hour Concentration (ppm)	0.185	0.099	0.138	0.134	0.095	0.081
	Max. 8-hour Concentration (ppm)	0.118	0.085	0.090	0.092	0.082	0.070
	# Days>Federal 8-hour Std. Of >0.070 ppm	22	2	6	8	1	0
	# Days>California 1-hour Std. Of >0.09 ppm	14	1	1	6	1	0
Nitrogen Dioxide (NO_2)	Year Coverage**	90	92	98	95	98	98
	Max. 1-hour Concentration (ppb)	61.8	77.8	75.1	76.6	60.6	51.4
	98th Percentile 1-hour Concentration (ppb)	55.8	57.3	56.9	43.9	41.6	44.5
	National Annual Standard Design Value (ppb)	18	18	18	11	10	11
	California Annual Average (ppb)	17	17	18	10	10	11
	# Days>California 1-hour Std. of >180 ppb	0	0	0	0	0	0
Sulfur Dioxide (SO_2)	Max. 24-hour Concentration (ppb)	0.9	1.2	1.2	NM	NM	NM
	Annual Average (ppb)	0.23	0.39	0.26	NM	NM	NM
	# Days>Federal 1-hour Std. of >75 ppb	0	0	0	NM	NM	NM
Suspended Particulates (PM_{10})	Year Coverage**	88	97	0	NM	NM	NM
	Max. 24-hr National/State Conc. (µg/m^3)***	83.7/185.2	64.0/138.5	61.0/43.7	NM	NM	NM
	#Days>Fed. 24-hour Std. of>150 µg/m^3	0	0	0	NM	NM	NM
	#Days>California 24-hour Std. of>50 µg/m^3	34	14	0	NM	NM	NM
	National Annual Avg/State Annual Avg (µg/m^3)	33.1/33.9	26.0/30.9	29.4/24.1	NM	NM	NM
Suspended Particulates ($PM_{2.5}$)	Year Coverage**	99	100	99	NM	NM	NM
	Max. 24-hour Concentration (µg/m^3)	175.0	61.0	33.7	NM	NM	NM
	State Annual Average (µg/m^3)	15.0	14.8	11.1	NM	NM	NM
	#Days>Fed. 24-hour Std. of>35 µg/m^3	12	13	0	NM	NM	NM
	National Annual Average (µg/m^3)	13.7	12.8	10.9	NM	NM	NM

Source: CARB 2023b; USEPA 2023c (for CO and SO_2)
* The number of days above the standard is not necessarily the number of violations of the standard for the year.
** *Year Coverage* indicates how extensive monitoring was during the time of year when high pollutant concentrations were expected.
*** State statistics are based on California-approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods. State and national statistics may therefore be based on different samplers.
µg/m^3 = micrograms per cubic meter; NM = not measured; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; ppb = parts per billion; ppm = parts per million

KNE is included in the regional emissions analysis conducted by SCAG for the conforming 2020-2045 RTP/SCS (RTP ID S1160294). The RTP/SCS includes all KNE elements, and KNE's design concept and scope have not changed significantly from what was analyzed in the 2020-2045 RTP/SCS. This analysis found that the plan and, therefore, the individual projects contained in the plan, are conforming projects and will have air quality impacts consistent with those identified in the SIPs for achieving the NAAQS. The 2020-2045 RTP/SCS was adopted by SCAG on September 3, 2020.

Effective October 31, 2019, USEPA approved the 2008 8-hour O_3 NAAQS SIP in the 2016 South Coast AQMP. As a result, the 2016 South Coast AQMP/Ozone SIP is the applicable Ozone SIP for the SCAB (SCAQMD 2017). On January 26, 2023, CARB adopted the 2022 South Coast AQMP, which will be effective for purposes of federal law upon approval by the USEPA. The 2022 South Coast AQMP incorporates projections of regional growth from the Connect SoCal 2020–2045 RTP/SCS pertaining to population, housing, employment, and vehicle travel within the SCAB into its prescriptive approach for reducing regional air pollution. The 2022 South Coast AQMP includes both stationary and mobile source strategies to address the challenge of reducing NO_x emissions sufficiently to achieve attainment of the O_3 NAAQS (SCAQMD 2022).

3.3.6 PROJECT MEASURES

Project measures are design features, best management practices (BMPs), or other commitments that Metro would implement as part of all proposed alignments and stations, the design option, and the MSF to reduce or avoid environmental effects associated with project construction and operation. Project measures are not the same as mitigation measures, which are used to reduce an environmental impact's significance level. Where applicable, project measures are also discussed in Section 3.3.7 as part of the evaluation of environmental impacts.

3.3.6.1 PM AQ-1: METRO GREEN CONSTRUCTION POLICY

Established by formal adoption of the Green Construction Policy in 2011, Metro commits to the following construction equipment requirements, construction best management practices (BMPs), and implementation strategies for all construction projects performed on Metro properties or rights-of-way (Metro 2011):

- Construction equipment shall incorporate, where feasible, emissions-reducing technology such as hybrid drives and specific fuel economy standards.
- Equipment shall be maintained according to manufacturer specifications.
- Idling of construction equipment and heavy-duty trucks shall be restricted to a maximum of five minutes when not in use (certain exceptions apply based on CARB exemptions).
- Traffic speeds shall be limited on all unpaved roads to 15 miles per hour or less.
- All off-road diesel-powered construction equipment greater than 50 horsepower shall meet Tier 4 off-road emission standards at a minimum.
- All on-road heavy-duty trucks with a gross vehicle weight rating greater than or equal to 14,000 pounds shall have engines meeting U.S. 2010 on-road emission standards.

- Where applicable and feasible, coordination shall occur with local jurisdictions to improve traffic flow by signal synchronization during construction activities.
- Electric power shall be used in lieu of diesel power where available.
- Generators: Every effort shall be made to use grid-based electric power at any construction site, where feasible. Where access to the power grid is not available, on-site generators must:
  - Meet a 0.01 gram per brake-horsepower-hour standard for particulate matter; or
  - Be equipped with Best Available Control Technology for particulate matter emissions reductions.
- Inspections: Metro shall conduct inspections of construction sites and affected off-road and on-road equipment and generators as well as compliance with air quality rules.
- Records: Prior to Notice to Proceed to commence construction and to be verified afterward consistent with project contract requirements and through enforcement provisions above, the Contractor shall submit to Metro the following information for all construction equipment to be used on Metro properties or rights-of-way:
  - A certified statement that all construction equipment used conforms to the requirements specified above;
  - A list of all the equipment and vehicles (i.e., off-road equipment, include the CARB-issued Equipment Identification Number) to be used; and
  - A copy of each Contractor's certified U.S. Environmental Protection Agency rating and applicable paperwork issued either by CARB, SCAQMD, and any other jurisdiction that has oversight over the equipment.

3.3.6.2 PM AQ-2: SCAQMD RULE 403

Construction of the project would implement the following BMPs in compliance with SCAQMD Rule 403 – Fugitive Dust (SCAQMD 2005):

- Backfilling: Stabilize backfill materials when actively being handled or when inactive, and stabilize soil at completion of activity.
- Clearing/grubbing: Maintain stability of soil through watering of site prior to, during, and after all clearing/grubbing activities.
- Cut-and-fill: Pre-water soils prior to cut-and-fill activities using water trucks; stabilize soil during and after activities.
- Debris hauling: All trucks hauling dirt, sand, soil, or other loose materials are to be tarped with a fabric cover and maintain a freeboard height of 12 inches.
- Demolition activities: Prohibit demolition activities when wind speeds exceed 25 miles per hour; apply water to disturbed soils after demolition is completed or at the end of each day of cleanup.
- Disturbed soil: Stabilize disturbed soil throughout the construction site by limiting vehicular traffic and disturbance on soil where possible and applying water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes (Rule 401 – Visible Emissions).

- Disturbed surface areas: Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface; apply water at three-hour intervals to at least 80 percent of the unstabilized area.
- Earth-moving activities: Pre-apply water to depth of proposed cuts and reapply as necessary to maintain soils in a damp condition and to ensure that visible dust plumes do not exceed 100 feet in any direction.
- Importing/exporting of bulk materials: Stabilize material while loading/unloading/transporting to reduce fugitive dust emissions and maintain at least six inches of freeboard on haul vehicles.
- Staging areas and unpaved roads: Stabilize surface areas and limit vehicle speeds to 15 miles per hour.
- Stockpiles/bulk material handling: Stabilize stockpiled materials with intermittent watering and limit stockpiles to eight feet in height within 100 yards of off-site occupied buildings.
- Trenching: Stabilize surface soils with pre-watering where trencher or excavator and support equipment will operate; wash mud and soils from equipment at completion of activities.

3.3.6.3 PM AQ-3: METRO 2020 MOVING BEYOND SUSTAINABILITY STRATEGIC PLAN

Construction and operation of the project will adhere to the commitments established by the MBSSP 2020, including, but not limited to, the application of renewable diesel requirements for contractors, the implementation of the Construction and Demolition Debris Policy, the identification of opportunities to decarbonize fuel sources at construction sites, the use of electric medium- and heavy-duty equipment during construction, and the design and build of capital projects to CalGreen Tier 2 standards (Metro 2020).

3.3.6.4 PM AQ-4: METRO DESIGN STANDARDS

The project will be designed in accordance with the Metro Rail Design Criteria and the Metro Systemwide Station Design Standards Policy, which includes the installation of high-efficiency LED lighting in all fixtures to reduce electricity consumption (Metro 2017, 2018).

3.3.7 IMPACT EVALUATION AND MITIGATION MEASURES

This analysis presents the construction and operational impacts for air quality, as well as any applicable mitigation measures associated with KNE. A summary of the impact conclusions and applicable mitigation measures is found in Table 3.3-29 in Section 3.3.7.6.

3.3.7.1 IMPACT AQ-1: AIR QUALITY PLAN

Impact AQ-1: Would the project conflict with or obstruct implementation of the applicable air quality plan?

The applicable air quality plans are the SCAQMD 2016 AQMP (approved by USEPA), SCAQMD 2022 AQMP (approved by CARB and awaiting USEPA approval), and the conforming SCAG 2020-2045 RTP/SCS. As indicated in the SCAQMD Handbook (SCAQMD 1993), a project is consistent with the AQMP if:

- The project does not result in an increase to the frequency or severity of an existing air quality violation;
- The project does not cause or contribute to new air quality violations;
- The project does not delay the timely attainment of the air quality standards or the interim emission reductions specified in the AQMP;
- The project is consistent with the population and employment growth projections upon which the AQMP-forecasted emission levels are based;
- Project development is consistent with AQMP land use policies; and
- The project is consistent with the applicable mitigation measures assumed in preparation of the AQMP.

KNE was identified as a Strategic Project in the SCAG 2020-2045 RTP/SCS and was incorporated into its regional growth projections and transportation strategies. The SCAG 2020-2045 RTP/SCS conforms with the USEPA-approved SCAQMD 2016 AQMP, which is the applicable Ozone SIP for SCAB; SCAQMD's 2022 AQMP will be effective for purposes of federal law upon approval by the USEPA and relied on transportation, land use, and growth assumptions included in SCAG's 2020-2045 RTP/SCS in the development of its growth and regional air quality projections. Additional information regarding these plans is presented in Section 3.3.5.1.5.

Lowering passenger vehicle VMT is a universal focus of a number of climate action plans, including the 2022 Assembly Bill 32 Scoping Plan for Achieving Carbon Neutrality, the California State Transportation Agency Climate Action Plan for Transportation Infrastructure (2021), Metro's 2019 Climate Action and Adaptation Plan, the City of Los Angeles' Sustainable City pLAn (2015) and LA's Green New Deal (the updated version of the pLAn, 2019), and the City of West Hollywood's 2021 WeHo Climate Action Plan. Lowering passenger vehicle VMT reduces emissions of all criteria pollutants in addition to the GHG emissions reductions called for by these plans.

3.3.7.1.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.3.7.1.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE San Vicente–Fairfax Alignment would not conflict with or obstruct the implementation of the applicable plans because the alignment would not result in an increase in the frequency or severity of an existing air quality violation, cause or contribute to new air quality violations, or delay the timely attainment of the air quality standards or the interim emission reductions specified in the AQMP.

Construction activities would generate temporary emissions of regulated air pollutants, which would cease upon completion of construction of the light rail transit corridor. As discussed under Impact AQ-2, emissions from construction activities would not exceed applicable SCAQMD thresholds for all criteria pollutants during construction of the alignment and stations and would therefore not contribute to new air quality violations or an increase in the frequency or severity of existing air quality violations. Project measures PM

AQ-1, PM AQ-2, and PM AQ-3 would be implemented throughout construction to avoid and minimize air pollutant emissions by following equipment and fuel requirements and controlling fugitive dust.

As discussed in Section 3.10, Growth Inducing Impacts, construction of the alignment would not introduce new population or housing growth in the RSA, and any additional employment at Metro-operated facilities would not disproportionately contribute to the growth projections in the SCAG 2020-2045 RTP/SCS. Construction of the alignment and stations would be consistent with the population and employment growth projections upon which the AQMP-forecasted emission levels are based. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.3.7.1.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE San Vicente–Fairfax Alignment would not conflict with or obstruct the implementation of applicable plans because the alignment would not result in an increase in the frequency or severity of an existing air quality violation, cause or contribute to new air quality violations, or delay the timely attainment of the air quality standards or the interim emission reductions specified in the AQMP.

As discussed under Impact AQ-2 below, the change in regional emissions would not exceed applicable SCAQMD thresholds for all criteria pollutants during operation of the alignment and would therefore not contribute to new air quality violations or an increase in the frequency or severity of existing air quality violations.

As shown in Table 3.3-7, annual regional passenger VMT under the KNE San Vicente–Fairfax Alignment would be reduced by 49,448,375 as compared to the 2045 without Project Conditions. This is consistent with key objectives of the SCAG 2020-2045 RTP/SCS related to the expansion of high-quality transit infrastructure and reduction of VMT and the VMT-reducing objectives of the AQMP's Transportation Control Measures. Therefore, the alignment would not delay the timely attainment of air quality standards or interim emission reductions specified in the AQMP. KNE, including the alignment, is included in the conforming SCAG 2020-2045 RTP/SCS.

TABLE 3.3-7. KNE SAN VICENTE–FAIRFAX ALIGNMENT VEHICLE MILES TRAVELED

CONDITION	ANNUAL VMT
KNE San Vicente–Fairfax Alignment (2045)	214,090,029,819
2045 without Project Conditions	214,139,478,194
Change in VMT due to project	-49,448,375

Source: Connect Los Angeles Partners 2023
VMT = vehicle miles traveled

Operation of the alignment would not introduce a new permanent source of air pollutant emissions to the SCAB. LRVs would be propelled by electricity and would not directly consume petroleum fuels, the combustion of which would create air pollutant emissions. Emissions of criteria air pollutants that would be produced indirectly at electricity-generating facilities are regulated under permitting programs

administered by SCAQMD and are not under the purview of CEQA. Additionally, project measure PM AQ-4 would require use of high-efficiency LED lighting in light fixtures at stations and other facilities, consistent with SCAQMD AQMP measure ECC-02: Co-Benefits from Existing and Future Residential and Commercial Building Energy Efficiency Measures.

As discussed in Section 3.10, Growth Inducing Impacts, operation of the alignment would not introduce new population or housing growth in the RSA, and any additional employment at Metro-operated facilities would not disproportionately contribute to the growth projections in the SCAG 2020-2045 RTP/SCS. Operation of the alignment would be consistent with the population and employment growth projections upon which the AQMP-forecasted emission levels are based. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.3.7.1.2 KNE FAIRFAX ALIGNMENT

3.3.7.1.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE Fairfax Alignment would not conflict with or obstruct the implementation of the applicable plans because the alignment would not result in an increase in the frequency or severity of an existing air quality violation, cause or contribute to new air quality violations, or delay the timely attainment of the air quality standards or the interim emission reductions specified in the AQMP.

Construction activities would generate temporary emissions of regulated air pollutants, which would cease upon completion of construction of the light rail transit corridor. As discussed under Impact AQ-2, emissions from construction activities would not exceed applicable SCAQMD thresholds for all criteria pollutants during construction of the KNE Fairfax Alignment and would therefore not contribute to new air quality violations or an increase in the frequency or severity of existing air quality violations. Project measures PM AQ-1, PM AQ-2, and PM AQ-3 would be implemented throughout construction to avoid and minimize air pollutant emissions by following equipment and fuel requirements and controlling fugitive dust.

As discussed in Section 3.10, Growth Inducing Impacts, construction of the KNE Fairfax Alignment would not introduce new population or housing growth in the RSA, and any additional employment at Metro-operated facilities would not disproportionately contribute to the growth projections in the SCAG 2020-2045 RTP/SCS. Construction of the KNE Fairfax Alignment would be consistent with the population and employment growth projections upon which the AQMP-forecasted emission levels are based. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.3.7.1.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE Fairfax Alignment would not conflict with or obstruct the implementation of the applicable plans because the alignment would not result in an increase in the frequency or severity of an existing air quality violation, cause or contribute to new air quality violations, or delay the timely attainment of the air quality standards or the interim emission reductions specified in the AQMP.

As discussed under Impact AQ-2 below, the change in regional emissions would not exceed applicable SCAQMD thresholds for all criteria pollutants during operation of the KNE Fairfax Alignment and would therefore not contribute to new air quality violations or an increase in the frequency or severity of existing air quality violations.

As shown in Table 3.3-8, the annual regional passenger VMT is forecasted to be reduced by 46,518,885 under the alignment as compared to the 2045 without Project Conditions. This is consistent with key objectives of the SCAG 2020-2045 RTP/SCS related to the expansion of high-quality transit infrastructure and reduction of VMT and the VMT-reducing objectives of the AQMP's Transportation Control Measures. Therefore, the KNE Fairfax Alignment would not delay the timely attainment of air quality standards or interim emission reductions specified in the AQMP. KNE, including the alignment, is included in the conforming SCAG 2020-2045 RTP/SCS.

TABLE 3.3-8. KNE FAIRFAX ALIGNMENT VEHICLE MILES TRAVELED

CONDITION	ANNUAL VMT
KNE Fairfax Alignment (2045)	214,092,959,309
2045 without Project Conditions	214,139,478,194
Change in VMT due to project	-46,518,885

Source: Connect Los Angeles Partners 2023
VMT = vehicle miles traveled

Operation of the KNE Fairfax Alignment would not introduce a new permanent source of air pollutant emissions to the SCAB. LRVs would be propelled by electricity and would not directly consume petroleum fuels, the combustion of which would create air pollutant emissions. Emissions of criteria air pollutants that would be produced indirectly at electricity-generating facilities are regulated under permitting programs administered by SCAQMD and are not under the purview of CEQA. Additionally, project measure PM AQ-4 would require use of high-efficiency LED lighting in light fixtures at stations and other facilities, consistent with SCAQMD AQMP measure ECC-02: Co-Benefits from Existing and Future Residential and Commercial Building Energy Efficiency Measures.

As discussed in Section 3.10, Growth Inducing Impacts, operation of the KNE Fairfax Alignment would not introduce new population or housing growth in the RSA, and any additional employment at Metro-operated facilities would not disproportionately contribute to the growth projections in the SCAG 2020-2045 RTP/SCS. Operation of the KNE Fairfax Alignment would be consistent with the population and employment growth projections upon which the AQMP-forecasted emission levels are based. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.3.7.1.3 KNE LA BREA ALIGNMENT

3.3.7.1.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE La Brea Alignment would not conflict with or obstruct the implementation of the applicable plans because the alignment would not result in an increase in the frequency or severity of an existing air quality violation, cause or contribute to new air

quality violations, or delay the timely attainment of the air quality standards or the interim emission reductions specified in the AQMP.

Construction activities would generate temporary emissions of regulated air pollutants, which would cease upon completion of construction of the light rail transit corridor. As discussed under Impact AQ-2, emissions from construction activities would not exceed applicable SCAQMD thresholds for all criteria pollutants during construction of the KNE La Brea Alignment and would therefore not contribute to new air quality violations or an increase in the frequency or severity of existing air quality violations. Project measures PM AQ-1, PM AQ-2, and PM AQ-3 would be implemented throughout construction to avoid and minimize air pollutant emissions by following equipment and fuel requirements and controlling fugitive dust.

As discussed in Section 3.10, Growth Inducing Impacts, construction of the KNE La Brea Alignment would not introduce new population or housing growth in the RSA, and any additional employment at Metro-operated facilities would not disproportionately contribute to the growth projections in the SCAG 2020-2045 RTP/SCS. Construction of the KNE La Brea Alignment would be consistent with the population and employment growth projections upon which the AQMP-forecasted emission levels are based. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.3.7.1.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. Construction of the KNE La Brea Alignment would not conflict with or obstruct the implementation of the applicable plans because KNE would not result in an increase in the frequency or severity of an existing air quality violation, cause or contribute to new air quality violations, or delay the timely attainment of the air quality standards or the interim emission reductions specified in the AQMP.

As discussed under Impact AQ-2 below, the change in regional emissions would not exceed applicable SCAQMD thresholds for all criteria pollutants during operation of the KNE La Brea Alignment and would therefore not contribute to new air quality violations or an increase in the frequency or severity of existing air quality violations.

As shown in Table 3.3-9, the annual regional passenger VMT is forecasted to be reduced by 49,456,770 under the alignment as compared to the 2045 without Project Conditions. This is consistent with key objectives of the SCAG 2020-2045 RTP/SCS related to the expansion of high-quality transit infrastructure and reduction of VMT and the VMT-reducing objectives of the AQMP's Transportation Control Measures. Therefore, the KNE La Brea Alignment would not delay the timely attainment of air quality standards or interim emission reductions specified in the AQMP. KNE, including the alignment, is included in the conforming SCAG 2020-2045 RTP/SCS.

TABLE 3.3-9. KNE LA BREA ALIGNMENT VEHICLE MILES TRAVELED

CONDITION	ANNUAL VMT
KNE La Brea Alignment (2045)	214,090,021,424
2045 without Project Conditions	214,139,478,194
Change in VMT due to Project	-49,456,770

Source: Connect Los Angeles Partners 2023
VMT = vehicle miles traveled

Operation of the KNE La Brea Alignment would not introduce a new permanent source of air pollutant emissions to the SCAB. LRVs would be propelled by electricity and would not directly consume petroleum fuels, the combustion of which would create air pollutant emissions. Emissions of criteria air pollutants that would be produced indirectly at electricity-generating facilities are regulated under permitting programs administered by SCAQMD and are not under the purview of CEQA. Additionally, project measure PM AQ-4 would require use of high-efficiency LED lighting in light fixtures at stations and other facilities, consistent with SCAQMD AQMP measure ECC-02: Co-Benefits from Existing and Future Residential and Commercial Building Energy Efficiency Measures.

As discussed in Section 3.10, Growth Inducing Impacts, operation of the KNE La Brea Alignment would not introduce new population or housing growth in the RSA, and any additional employment at Metro-operated facilities would not disproportionately contribute to the growth projections in the SCAG 2020-2045 RTP/SCS. Operation of the KNE La Brea Alignment would be consistent with the population and employment growth projections upon which the AQMP-forecasted emission levels are based. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.3.7.1.4 HOLLYWOOD BOWL DESIGN OPTION

3.3.7.1.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the Hollywood Bowl Design Option would not conflict with or obstruct the implementation of the applicable plans because the design option would not result in an increase to the frequency or severity of an existing air quality violation, cause or contribute to new air quality violations, or delay the timely attainment of the air quality standards or the interim emission reductions specified in the AQMP.

Construction activities would generate temporary emissions of regulated air pollutants, which would cease upon completion of construction of the light rail transit corridor. As discussed under Impact AQ-2 below, emissions from construction activities would not exceed applicable SCAQMD thresholds for all criteria pollutants during construction of the Hollywood Bowl Design Option and would therefore not contribute to new air quality violations or an increase in the frequency or severity of existing air quality violations. Project measures PM AQ-1, PM AQ-2, and PM AQ-3 would be implemented throughout construction to avoid and minimize air pollutant emissions by following equipment and fuel requirements and controlling fugitive dust.

As discussed in Section 3.10, Growth Inducing Impacts, construction of the Hollywood Bowl Design Option would not introduce new population or housing growth in the RSA, and any additional employment at Metro-operated facilities would not disproportionately contribute to the growth projections in the SCAG 2020-2045 RTP/SCS. Construction of the Hollywood Bowl Design Option would be consistent with the population and employment growth projections upon which the AQMP-forecasted emission levels are based. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.3.7.1.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the Hollywood Bowl Design Option would not conflict with or obstruct the implementation of the applicable plans because KNE would not result in an increase in the frequency or severity of an existing air quality violation, cause or contribute to new air quality violations, or delay the timely attainment of the air quality standards or the interim emission reductions specified in the AQMP.

As discussed under Impact AQ-2 below, the Metro Corridor Based Model 2018c forecasts that the Hollywood Bowl Design Option would not contribute to a meaningful change in regional VMT beyond that expected with implementation of the alignments, and there would be no additional impacts to operational criteria pollutant emissions. The change in regional emissions would not exceed applicable SCAQMD thresholds for all criteria pollutants during operation of the Hollywood Bowl Design Option and would therefore not contribute to new air quality violations or an increase in the frequency or severity of existing air quality violations. Operation of the Hollywood Bowl Design Option would not delay the timely attainment of air quality standards or interim emission reductions specified in the AQMP. KNE, including the Hollywood Bowl Design Option, is included in the conforming SCAG 2020-2045 RTP/SCS.

Operation of the Hollywood Bowl Design Option would not introduce a new permanent source of air pollutant emissions to the SCAB. LRVs would be propelled by electricity and would not directly consume petroleum fuels, the combustion of which would create air pollutant emissions. Emissions of criteria air pollutants that would be produced indirectly at electricity-generating facilities are regulated under permitting programs administered by SCAQMD and are not under the purview of CEQA. Additionally, project measure PM AQ-4 would require use of high-efficiency LED lighting in light fixtures at stations and other facilities, consistent with SCAQMD AQMP measure ECC-02: Co-Benefits from Existing and Future Residential and Commercial Building Energy Efficiency Measures.

As discussed in Section 3.10, Growth Inducing Impacts, operation of the Hollywood Bowl Design Option would not introduce new population or housing growth in the RSA and any additional employment at Metro-operated facilities would not disproportionately contribute to the growth projections in the SCAG 2020-2045 RTP/SCS. Operation of the Hollywood Bowl Design Option would be consistent with the population and employment growth projections upon which the AQMP-forecasted emission levels are based. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.3.7.1.5 MAINTENANCE AND STORAGE FACILITY

3.3.7.1.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the MSF would not conflict with or obstruct the implementation of the applicable plans because KNE would not result in an increase to the frequency or severity of an existing air quality violation, cause or contribute to new air quality violations, or delay the timely attainment of the air quality standards or the interim emission reductions specified in the AQMP.

Construction activities would generate temporary emissions of regulated air pollutants, which would cease upon completion of construction. As discussed under Impact AQ-2 below, emissions from construction activities would not exceed applicable SCAQMD thresholds for all criteria pollutants during construction of the MSF and would therefore not contribute to new air quality violations or an increase in the frequency or severity of existing air quality violations. Project measures PM AQ-1, PM AQ-2, and PM AQ-3 would be implemented throughout construction to avoid and minimize air pollutant emissions by following equipment and fuel requirements and controlling fugitive dust.

As discussed in Section 3.10, Growth Inducing Impacts, construction of the MSF would not introduce new population or housing growth in the RSA, and any additional employment at Metro-operated facilities would not disproportionately contribute to the growth projections in the SCAG 2020-2045 RTP/SCS. Construction of the MSF is consistent with the population and employment growth projections upon which the AQMP-forecasted emission levels are based. Therefore, the MSF would have a less than significant impact during construction.

3.3.7.1.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the MSF would not conflict with or obstruct the implementation of the applicable plans because it would not result in an increase in the frequency or severity of an existing air quality violation, cause or contribute to new air quality violations, or delay the timely attainment of the air quality standards or the interim emission reductions specified in the AQMP.

As discussed under Impact AQ-2, employee commute trips associated with operation of the MSF are included in the regional VMT projections used to evaluate the vehicle emissions from the alignments, and there would be no additional impacts to regional operational criteria pollutant emissions associated with operational vehicle travel.

Project measure PM AQ-4 would be implemented, requiring use of high-efficiency LED lighting in light fixtures at stations and other facilities. As discussed under Impact AQ-2, emissions from operations and maintenance activities at the MSF would not exceed applicable SCAQMD thresholds for all criteria pollutants and would therefore not contribute to new air quality violations or an increase in the frequency or severity of existing air quality violations.

KNE, of which the MSF is an essential part, is included in the conforming SCAG 2020-2045 RTP/SCS. As discussed in Section 3.10, Growth Inducing Impacts, operation of the MSF would not introduce new population or housing growth in the RSA, and any additional employment at Metro-operated facilities would not disproportionately contribute to the growth projections in the SCAG 2020-2045 RTP/SCS.

Operation of the MSF is consistent with the population and employment growth projections upon which the AQMP-forecasted emission levels are based. Therefore, the MSF would have a less than significant impact during operation.

3.3.7.2 IMPACT AQ-2: REGIONAL CRITERIA POLLUTANT EMISSIONS

Impact AQ-2: Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard?

The SCAG region is the RSA for evaluation of regional impacts for air quality to capture all changes to regional VMT; however, the applicable attainment designations are those for the SCAB. The SCAB is currently designated as being in nonattainment of the federal and/or state ambient air quality standards for O_3, PM_{10}, and $PM_{2.5}$. SCAQMD has promulgated guidance related to cumulatively considerable emissions, stating that if daily emissions associated with implementation of a project do not exceed regional significance threshold values, those emissions would not be considered cumulatively considerable and significant. As a result, SCAQMD's project-specific and cumulative significance thresholds are the same. SCAQMD's significance thresholds acknowledge regional sources already contributing to nonattainment and other current and future individual projects. Daily air pollutant emissions that would be generated by construction and operation of each of the alignments, the design option, and the MSF are evaluated in the context of the SCAQMD Air Quality Significance Thresholds in Table 3.3-2 above.

3.3.7.2.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.3.7.2.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction emissions associated with the KNE San Vicente–Fairfax Alignment would be generated from heavy-duty construction equipment exhaust; fugitive dust (particulate matter) from material movement and ground disturbance; exhaust from worker vehicle travel to and from the project site; exhaust from haul trucks, delivery trucks, and cement trucks importing and exporting material to the project site; and on-road re-entrained dust and brake and tire wear.

The KNE San Vicente–Fairfax Alignment would be constructed in three sections. Section 1 would extend from the Expo/Crenshaw Station to the Wilshire/Fairfax Station. Section 2 would extend from the Section 1 terminus at the Wilshire/Fairfax Station to the San Vicente/Santa Monica Station. Section 3 would extend from the Section 2 terminus at the San Vicente/Santa Monica Station to the northern terminus at either the Hollywood/Highland Station or the optional Hollywood Bowl Station.

The MSF is an essential element in supporting the reliable operation of a light rail transit (LRT) system and would be necessary for the implementation and operation of the alignment. Project activities associated with the MSF would occur in two parts, concurrent with construction of Section 1 and Section 2 of each alignment. Concurrently with Section 1 of the alignment, MSF facility construction would include the addition of four storage tracks to the existing Division 16 site to accommodate increased LRV storage. Concurrently with Section 2 of the alignment, MSF facility construction would include expansion of the

existing Division 16 MSF on the adjacent 16.5-acre site. No MSF construction would occur concurrently with Section 3 of the KNE San Vicente–Fairfax Alignment.

This analysis assumes that each of the three sections of the alignment would be built sequentially, not concurrently; therefore, maximum daily emissions have been presented and compared to the thresholds separately. Since construction of the alignment and the MSF storage tracks as part of Section 1 would occur concurrently, criteria pollutant emissions were considered together when determining maximum daily emissions for comparison to the thresholds. Similarly, criteria pollutant emissions from concurrent construction of the alignment and the MSF expansion as part of Section 2 were considered together when determining maximum daily emissions for comparison to the thresholds. If concurrent construction of alignment sections is expected, further analysis will be needed to determine combined air quality impacts. As a result of uncertainty in the timing for construction of each section, 2041 was used as a representative "Year 1" for all sections when calculating criteria pollutant emissions since it is the first anticipated construction year for the project.

In accordance with guidance from SCAQMD, the air quality assessment characterized the maximum mass daily emissions that would occur during construction. The maximum daily emissions represent a reasonably conservative estimate of the highest anticipated daily emissions based on detailed phasing and equipment information developed for the alignment and MSF. Daily emissions were calculated for all construction activities over the entire construction period to determine the maximum daily emissions. While the maximum daily emissions are based on a specific combination of estimated concurrent construction activities, they are considered representative of the worst case over the entire construction period. Therefore, the maximum daily emissions are presented as totals and not broken out by source. Daily activity levels and emissions would fluctuate throughout construction and would be lower on average than the calculated daily maximums.

Table 3.3-10 presents the maximum daily criteria pollutant emissions that would be generated during construction of each section of the alignment, including construction of Section 1 of the alignment concurrently with Section 1 MSF facilities, as well as Section 2 of the alignment that would be constructed concurrently with the Division 16 expansion; it also identifies SCAQMD Air Quality Significance Thresholds for mass daily emissions at the regional level. SCAQMD's guidance states that CEQA projects may emit air pollutants at quantities below the air quality significance thresholds without being considered significant at the project or cumulatively considerable level. Projects that generate emissions in excess of the project-specific thresholds are considered to be cumulatively considerable and significant.

TABLE 3.3-10. KNE SAN VICENTE–FAIRFAX ALIGNMENT CRITERIA POLLUTANT CONSTRUCTION EMISSIONS

PROJECT ELEMENT[1]	MAXIMUM DAILY EMISSIONS (LBS/DAY)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Section 1: Expo/Crenshaw Station to Wilshire/Fairfax Station with Corresponding MSF Facilities[2]	3	56	69	0	18	8
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
Section 2: Wilshire/Fairfax Station to San Vicente/Santa Monica Station with MSF Expansion[3]	4	60	83	0	17	6
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
Section 3: San Vicente/Santa Monica Station to Hollywood/Highland Station	4	86	80	1	26	9
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023

[1] The analysis assumes that each of the three sections of the KNE San Vicente–Fairfax Alignment would be built sequentially, not concurrently; therefore, maximum daily emissions have been presented and compared to the thresholds separately. If concurrent construction is expected, further analysis will be needed to determine combined air quality impacts.

[2] The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignment. MSF facilities would be constructed concurrently with the Section 1 portion of the alignment and would include the addition of four storage tracks to the existing Division 16 site. As such, daily criteria pollutant emissions associated with these MSF facilities have been included with the alignment's Section 1 daily emissions when determining maximum daily emissions for comparison to the thresholds.

[3] The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignment. The MSF expansion would be constructed as part of Section 2 concurrently with the alignment and would include expansion of the existing Division 16 MSF on the adjacent 16.5-acre site. As such, daily criteria pollutant emissions associated with construction of the MSF expansion have been included with the alignment's Section 2 daily emissions when determining maximum daily emissions for comparison to the thresholds.

CO = carbon monoxide; lbs/day = pounds per day; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District; SO_X = sulfur oxides; VOC = volatile organic compounds

As shown in Table 3.3-10, maximum daily emissions estimates for each section of the alignment with concurrent construction of applicable MSF facilities would be below SCAQMD's mass daily CEQA thresholds.

All construction activities would be conducted in accordance with project measures PM AQ-1, PM AQ-2, and PM AQ-3 to avoid and minimize emissions. Reductions in fugitive dust emissions (affecting PM_{10} and $PM_{2.5}$ emissions) associated with watering as required by SCAQMD Rule 403 (see PM AQ-2) were included in the emission calculations. However, due to uncertainty in the availability of equipment and renewable diesel fuel in the vicinity of the alignment at the time of construction, emission reductions from other project measures were not accounted for in the construction emission estimates. Actual construction emissions are expected to be lower than those estimated and, as a result, this analysis is conservative.

While there would be a temporary increase in emissions of criteria pollutants from construction of the alignment, maximum daily regional emissions would be below SCAQMD CEQA significance thresholds at the cumulatively considerable level (SCAQMD 1993). Construction of the KNE San Vicente–Fairfax Alignment would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.3.7.2.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operational criteria air pollutant emission sources under the KNE San Vicente–Fairfax Alignment include exhaust from motor vehicle VMT in the RSA. Emissions associated with exhaust from motor vehicle VMT would be reduced under the alignment as compared to 2045 without Project Conditions due to increased transit use. The stations would not have designated parking, and the small amount of vehicle trips to and from the stations are included in the regional VMT forecasts. LRVs would be electrically powered and would not directly generate criteria pollutant emissions.

As presented in Table 3.3-11, there would be a net reduction in operational regional emissions of VOC, CO, NOx, sulfur oxides (SO_x), PM_{10}, and $PM_{2.5}$ under the alignment, primarily due to the reduction in motor vehicle VMT associated with ridership of the project. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

TABLE 3.3-11. KNE SAN VICENTE–FAIRFAX ALIGNMENT OPERATIONAL REGIONAL CRITERIA POLLUTANT EMISSIONS

	DAILY EMISSIONS (LBS/DAY)					
EMISSION SOURCE	VOC	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$
KNE SAN VICENTE–FAIRFAX ALIGNMENT (2045)						
Regional Traffic	9,252	646,974	85,879	3,548	32,391	11,313
2045 WITHOUT PROJECT CONDITIONS						
Regional Traffic	9,254	647,123	85,899	3,549	32,398	11,316
KNE SAN VICENTE–FAIRFAX ALIGNMENT (2045) COMPARED TO 2045 WITHOUT PROJECT CONDITIONS						
Net Project Emissions[1,2]	(2)	(149)	(20)	(1)	(7)	(3)
SCAQMD Threshold	55	550	55	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Connect Los Angeles Partners 2023
[1] Totals may vary due to rounding.
[2] Emission reductions (i.e., beneficial impacts) are shown in parentheses.
CO = carbon monoxide; lbs/day = pounds per day; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District; SO_X = sulfur oxides; VOC = volatile organic compounds

3.3.7.2.2 KNE FAIRFAX ALIGNMENT

3.3.7.2.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction emissions associated with the KNE Fairfax Alignment would be generated from heavy-duty construction equipment exhaust; fugitive dust (particulate matter) from material movement and ground disturbance; exhaust from worker vehicle travel to and from the project site; exhaust from haul trucks, delivery trucks, and cement trucks importing and exporting material to the project site; and on-road re-entrained dust and brake and tire wear.

The KNE Fairfax Alignment would be constructed in two sections. Section 1 would extend from the Expo/Crenshaw Station to the Wilshire/Fairfax Station. Section 2 would extend from the Section 1 terminus at the Wilshire/Fairfax Station to the northern terminus at either the Hollywood/Highland Station or the optional Hollywood Bowl Station.

The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the KNE Fairfax Alignment. Project activities associated with the MSF would occur in two parts, concurrent with Section 1 and Section 2 of the alignment. Concurrently with Section 1 of the alignments, MSF facility construction would include the addition of four storage tracks on the existing Division 16 site to accommodate increased LRV storage. Concurrently with Section 2 of the alignments, MSF facilities constructed would include expansion of the existing Division 16 MSF on an adjacent 16.5-acre site.

This analysis assumes that the two sections of the KNE Fairfax Alignment would be built sequentially, not concurrently; therefore, maximum daily emissions have been presented and compared to the thresholds separately. Since construction of the alignment and the MSF storage tracks as part of Section 1 would occur concurrently, criteria pollutant emissions were considered together when determining maximum daily emissions for comparison to the thresholds. Similarly, criteria pollutant emissions from concurrent construction of the alignment and the MSF expansion as part of Section 2 were considered together when determining maximum daily emissions for comparison to the thresholds. If concurrent construction of sections of the alignment is expected, further analysis will be needed to determine combined air quality impacts. As a result of uncertainty in the timing for construction of each section, 2041 was used as a representative “Year 1” for all sections when calculating criteria pollutant emissions since it is the first anticipated construction year for the project.

In accordance with guidance from SCAQMD, the air quality assessment characterized the maximum mass daily emissions that would occur during construction. The maximum daily emissions represent a reasonably conservative estimate of the highest anticipated daily emissions based on detailed phasing and equipment information developed for the alignment and MSF. Daily emissions were calculated for all construction activities over the entire construction period to determine the maximum daily emissions. While the maximum daily emissions are based on a specific combination of estimated concurrent construction activities, they are considered representative of the worst case over the entire construction period. Therefore, the maximum daily emissions are presented as totals and not broken out by source. Daily activity levels and emissions would fluctuate throughout construction and be lower on average than the calculated daily maximums.

Table 3.3-12 presents the maximum daily criteria pollutant emissions that would be generated during construction of each section of the alignment, including construction of Section 1 of the alignment concurrently with additional MSF facilities, as well as Section 2 of the alignment concurrently with the Division 16 expansion; it also identifies SCAQMD Air Quality Significance Thresholds for mass daily emissions at the regional level.

TABLE 3.3-12. KNE FAIRFAX ALIGNMENT CRITERIA POLLUTANT CONSTRUCTION EMISSIONS

PROJECT ELEMENT[1]	MAXIMUM DAILY EMISSIONS (LBS/DAY)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Section 1: Expo/Crenshaw Station to Wilshire/Fairfax Station with Corresponding MSF Facilities[2]	3	56	69	0	18	8
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
Section 2: Wilshire/Fairfax Station to Hollywood/Highland Station with MSF Expansion[3]	5	91	102	1	29	11
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023

[1] The analysis assumes that the two sections of the alignment would be built sequentially, not concurrently; therefore, maximum daily emissions have been presented and compared to the thresholds separately. If concurrent construction is expected, further analysis will be needed to determine combined air quality impacts.

[2] The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignment. MSF facilities would be constructed concurrently with the Section 1 portion of the alignment and would include the addition of four storage tracks to the existing Division 16 site. As such, daily criteria pollutant emissions associated with these MSF facilities have been included with the alignment's Section 1 daily emissions when determining maximum daily emissions for comparison to the thresholds.

[3] The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignment. The MSF expansion would be constructed as part of Section 2 concurrently with the alignment and would include expansion of the existing Division 16 MSF on the adjacent 16.5-acre site. As such, daily criteria pollutant emissions associated with construction of the MSF expansion have been included with the alignment's Section 2 daily emissions when determining maximum daily emissions for comparison to the thresholds.

CO = carbon monoxide; lbs/day = pounds per day; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District; SO_X = sulfur oxides; VOC = volatile organic compounds

As shown in Table 3.3-12, maximum daily emissions estimates for each section of the alignment with concurrent construction of applicable MSF facilities would be below SCAQMD's mass daily CEQA thresholds.

All construction activities would be conducted in accordance with project measures PM AQ-1, PM AQ-2, and PM AQ-3 to avoid and minimize emissions. Reductions in fugitive dust emissions (affecting PM_{10} and $PM_{2.5}$ emissions) associated with watering as required by SCAQMD Rule 403 (see PM AQ-2) were included in the emission calculations. However, due to uncertainty in the availability of equipment and renewable diesel fuel in the vicinity of KNE at the time of construction, emission reductions from other project measures were not accounted for in the construction emission estimates. Therefore, actual construction emissions are expected to be lower than those estimated and, as a result, this analysis is conservative.

While there would be a temporary increase in emissions of criteria pollutants from construction of the KNE Fairfax Alignment, maximum daily regional emissions would be below SCAQMD CEQA significance thresholds. In accordance with SCAQMD CEQA guidance, because emissions from construction would remain below the project-level CEQA thresholds, the emissions would also be considered less than significant at the cumulatively considerable level (SCAQMD 1993). Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.3.7.2.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operational criteria air pollutant emission sources under the KNE Fairfax Alignment include exhaust from motor vehicle VMT in the RSA. Emissions associated with exhaust from motor vehicle VMT would be reduced under the KNE Fairfax Alignment as compared to 2045 without Project Conditions due to increased transit use. The stations would not have designated parking, and the small amount of vehicle trips to and from the stations are included in the regional VMT forecasts. LRVs would be electrically powered and would not generate any direct criteria pollutant emissions.

Table 3.3-13 presents the regional emissions associated with operation of the alignment compared to the 2045 without Project Conditions. As shown, there would be a net reduction in operational regional emissions of VOC, CO, NO_X, SO_x, PM_{10}, and $PM_{2.5}$ under the alignment, primarily due to the reduction in motor vehicle VMT associated with ridership of the project. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

TABLE 3.3-13. KNE FAIRFAX ALIGNMENT OPERATIONAL REGIONAL CRITERIA POLLUTANT EMISSIONS

EMISSION SOURCE	DAILY EMISSIONS (LBS/DAY)					
	VOC	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$
KNE FAIRFAX ALIGNMENT (2045)						
Regional Traffic	9,252	646,983	85,880	3,548	32,391	11,313
2045 WITHOUT PROJECT CONDITIONS						
Regional Traffic	9,254	647,123	85,899	3,549	32,398	11,316
KNE FAIRFAX ALIGNMENT (2045) COMPARED TO 2045 WITHOUT PROJECT CONDITIONS						
Net Project Emissions[1,2]	(2)	(141)	(19)	(1)	(7)	(2)
SCAQMD Threshold	55	550	55	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Connect Los Angeles Partners 2023
[1] Totals may vary due to rounding.
[2] Emission reductions (i.e., beneficial impacts) are shown in parentheses.
CO = carbon monoxide; lbs/day = pounds per day; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District; SO_X = sulfur oxides; VOC = volatile organic compounds

3.3.7.2.3 KNE LA BREA ALIGNMENT

3.3.7.2.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction emissions associated with the KNE La Brea Alignment would be generated from heavy-duty construction equipment exhaust; fugitive dust (particulate matter) from material movement and ground disturbance; exhaust from worker vehicle travel to and from the project site; exhaust from haul trucks, delivery trucks, and cement trucks importing and exporting material to the project site, and on-road re-entrained dust and brake and tire wear. Criteria pollutant emissions from construction were estimated following the methodology described in Section 3.3.3.1.1.

The KNE La Brea Alignment would be constructed in two sections. Section 1 would extend from the Expo/Crenshaw Station to the Wilshire/La Brea Station. Section 2 would extend from the Section 1 terminus at the Wilshire/La Brea Station to the northern terminus at either the Hollywood/Highland Station or the optional Hollywood Bowl Station.

The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the KNE La Brea Alignment. Project activities associated with the MSF would occur in two parts, concurrent with Section 1 and Section 2 of the alignment. Concurrently with Section 1 of the alignment, MSF facility construction would include the addition of four storage tracks on the existing Division 16 site to accommodate increased LRV storage. Concurrently with Section 2 of the alignment, MSF facilities constructed would include expansion of the existing Division 16 MSF on an adjacent 16.5-acre site and comprise approximately 57,380 square feet of facility structures.

This analysis assumes that the two sections of the KNE La Brea Alignment would be built sequentially, not concurrently; therefore, maximum daily emissions have been presented and compared to the thresholds separately. Since construction of the alignment and the MSF storage tracks as part of Section 1 would occur concurrently, criteria pollutant emissions were considered together when determining maximum daily emissions for comparison to the thresholds. Similarly, criteria pollutant emissions from concurrent construction of the alignment and the MSF expansion as part of Section 2 were considered together when determining maximum daily emissions for comparison to the thresholds. If concurrent construction of alignment sections is expected, further analysis will be needed to determine combined air quality impacts. As a result of uncertainty in the timing for construction of each section, 2041 was used as a representative “Year 1” for all sections when calculating criteria pollutant emissions since it is the first anticipated construction year for the project.

In accordance with guidance from SCAQMD, the air quality assessment characterized the maximum mass daily emissions that would occur during construction. The maximum daily emissions represent a reasonably conservative estimate of the highest anticipated daily emissions based on detailed phasing and equipment information developed for the alignment and MSF. Daily emissions were calculated for all construction activities over the entire construction period to determine the maximum daily emissions. While the maximum daily emissions are based on a specific combination of estimated concurrent construction activities, they are considered representative of the worst case over the entire construction period. Therefore, the maximum daily emissions are presented as totals and are not broken out by

source. Daily activity levels and emissions would fluctuate throughout construction and be lower on average than the calculated daily maximums.

Table 3.3-14 presents the maximum daily criteria pollutant emissions that would be generated during construction of each section of the alignment, including construction of Section 1 of the alignment concurrently with additional MSF facilities, as well as Section 2 of the alignment concurrently with MSF expansion; it also identifies SCAQMD Air Quality Significance Thresholds for mass daily emissions at the regional level.

TABLE 3.3-14. KNE LA BREA ALIGNMENT CRITERIA POLLUTANT CONSTRUCTION EMISSIONS

PROJECT ELEMENT [1]	MAXIMUM DAILY EMISSIONS (LBS/DAY)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Section 1: Expo/Crenshaw Station to Wilshire/La Brea Station with Corresponding MSF Facilities [2]	3	58	69	0	18	8
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
Section 2: Wilshire/La Brea Station to Hollywood/Highland Station with MSF Expansion[3]	5	94	99	1	30	11
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023

[1] The analysis assumes that the two sections of the alignment would be built sequentially, not concurrently; therefore, maximum daily emissions have been presented and compared to the thresholds separately. If concurrent construction is expected, further analysis will be needed to determine combined air quality impacts.

[2] The MSF is an essential element in supporting the reliable operation of a light rail transit system and would be necessary for the implementation and operation of the alignment. MSF facilities would be constructed concurrently with the Section 1 portion of the alignment and would include the addition of four storage tracks to the existing Division 16 site. As such, daily criteria pollutant emissions associated with these MSF facilities have been included with the alignment's Section 1 daily emissions when determining maximum daily emissions for comparison to the thresholds.

[3] The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignment. The MSF expansion would be constructed as part of Section 2 concurrently with the alignment and would include expansion of the existing Division 16 MSF on the adjacent 16.5-acre site. As such, daily criteria pollutant emissions associated with construction of the MSF expansion have been included with the alignment's Section 2 daily emissions when determining maximum daily emissions for comparison to the thresholds.

CO = carbon monoxide; lbs/day = pounds per day; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District; SO_X = sulfur oxides; VOC = volatile organic compounds

As shown in Table 3.3-14, maximum daily emissions estimates for each section of the alignment with concurrent construction of applicable MSF facilities would be below SCAQMD's mass daily CEQA thresholds.

All construction activities would be conducted in accordance with project measures PM AQ-1, PM AQ-2, and PM AQ-3 to avoid and minimize emissions. Reductions in fugitive dust emissions (affecting PM_{10} and $PM_{2.5}$ emissions) associated with watering as required by SCAQMD Rule 403 (see PM AQ-2) were included in the emission calculations. However, due to uncertainty in the availability of equipment and renewable diesel fuel in the vicinity of KNE at the time of construction, emission reductions from other project

measures were not accounted for in the construction emission estimates. Actual construction emissions are expected to be lower than those estimated and, as a result, this analysis is conservative.

While there would be a temporary increase in emissions of criteria pollutants from construction of the KNE La Brea Alignment, maximum daily regional emissions would be below SCAQMD CEQA significance thresholds. In accordance with SCAQMD CEQA guidance, because emissions from construction would remain below the project-level CEQA thresholds, the emissions would also be considered less than significant at the cumulatively considerable level (SCAQMD 1993). Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.3.7.2.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operational criteria air pollutant emission sources under the KNE La Brea Alignment include exhaust from motor vehicle VMT in the RSA. Emissions associated with exhaust from motor vehicle VMT would be reduced under the KNE La Brea Alignment as compared to 2045 without Project Conditions due to increased transit use. The stations would not have designated parking, and the small amount of vehicle trips to and from the stations are included in the regional VMT forecasts. LRVs would be electrically powered and would not generate any direct criteria pollutant emissions.

Table 3.3-15 presents the regional emissions associated with operation of the alignment compared to the 2045 without Project Conditions. As shown, there would be a net reduction in operational regional emissions of VOC, CO, NO_X, SO_x, PM_{10}, and $PM_{2.5}$ under the alignment, primarily due to the reduction in motor vehicle VMT associated with ridership of the project. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

TABLE 3.3-15. KNE LA BREA ALIGNMENT OPERATIONAL REGIONAL CRITERIA POLLUTANT EMISSIONS

	DAILY EMISSIONS (LBS/DAY)					
EMISSION SOURCE	VOC	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$
KNE LA BREA ALIGNMENT (2045)						
Regional Traffic	9,252	646,974	85,879	3,548	32,391	11,313
2045 WITHOUT PROJECT CONDITIONS						
Regional Traffic	9,254	647,123	85,899	3,549	32,398	11,316
KNE LA BREA ALIGNMENT (2045) COMPARED TO 2045 WITHOUT PROJECT CONDITIONS						
Net Project Emissions[1,2]	(2)	(149)	(20)	(1)	(7)	(3)
SCAQMD Threshold	55	550	55	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Connect Los Angeles Partners 2023
[1] Totals may vary due to rounding.
[2] Emission reductions (beneficial impacts) are shown in parentheses.
CO = carbon monoxide; lbs/day = pounds per day; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District; SO_X = sulfur oxides; VOC = volatile organic compounds

3.3.7.2.4 HOLLYWOOD BOWL DESIGN OPTION

3.3.7.2.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The Hollywood Bowl Design Option changes the proposed Hollywood/Highland Station from a terminus station to an in-line station and adds a new Hollywood Bowl terminus station to the final section of each alignment (Section 3 of KNE San Vicente–Fairfax Alignment, Section 2 of the KNE Fairfax Alignment, and Section 2 of the KNE La Brea Alignment). In order to capture these changes, criteria pollutant emissions were recalculated for the final section of each alignment to include construction of the Hollywood Bowl Design Option. Construction of other sections (Section 1 and Section 2 of the KNE San Vicente–Fairfax Alignment, Section 1 of the KNE Fairfax Alignment, and Section 1 of the KNE La Brea Alignment) would not be affected by addition of the Hollywood Bowl Design Option to the final sections.

The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignments. Construction of the MSF expansion to Metro's existing Division 16 would occur concurrently with Section 2 of each alignment, meaning it would also occur concurrently with the Hollywood Bowl Design Option and Section 2 construction for the KNE Fairfax Alignment and KNE La Brea Alignment. As a result, criteria pollutant emissions for MSF Section 2 were considered with the Hollywood Bowl Design Option and Section 2 criteria pollutant emissions for the KNE Fairfax Alignment and KNE La Brea Alignment when determining maximum daily emissions for comparison to the thresholds.

As previously described, this analysis assumes that the sections of each alignment would be built sequentially, not concurrently; therefore, maximum daily emissions have been presented and compared to the thresholds separately. If concurrent construction of alignment sections is expected, further analysis will be needed to determine combined air quality impacts. As a result of uncertainty in the timing for construction of each section, 2041 was used as a representative "Year 1" for all sections when calculating criteria pollutant emissions because it is the first anticipated construction year for the project.

Construction emissions associated with the Hollywood Bowl Design Option would be generated from heavy-duty construction equipment exhaust; fugitive dust (particulate matter) from material movement and ground disturbance; exhaust from worker vehicle travel to and from the project site; exhaust from haul trucks, delivery trucks, and cement trucks importing and exporting material to the project site; and on-road re-entrained dust and brake and tire wear.

In accordance with guidance from SCAQMD, the air quality assessment characterized the maximum mass daily emissions that would occur during construction. The maximum daily emissions represent a reasonably conservative estimate of the highest anticipated daily emissions based on detailed phasing and equipment information developed for the project. Daily emissions were calculated for all construction activities over the entire construction period to determine the maximum daily emissions. While the maximum daily emissions are based on a specific combination of estimated concurrent construction activities, they are considered representative of the worst case over the entire construction period. Therefore, the maximum daily emissions are presented as totals and not broken out by source.

Daily activity levels and emissions would fluctuate throughout construction and would be lower on average than the calculated daily maximums.

Table 3.3-16, Table 3.3-17, and Table 3.3-18 present the maximum daily criteria pollutant emissions that would be generated during construction of the design option, including construction of Section 2 (KNE Fairfax and La Brea Alignment) or Section 3 (KNE San Vicente–Fairfax Alignment) of the alignments. Table 3.3-17 and Table 3.3-18 also include the concurrent construction of the MSF expansion, which is scheduled to occur as part of Section 2. (The MSF expansion is not considered in Table 3.3-16 because the design option would be built as part of Section 3 with the KNE San Vicente–Fairfax Alignment.) The tables also identify SCAQMD Air Quality Significance Thresholds for mass daily emissions at the regional level.

TABLE 3.3-16. KNE SAN VICENTE–FAIRFAX ALIGNMENT (SECTION 3) WITH HOLLYWOOD BOWL DESIGN OPTION CRITERIA POLLUTANT CONSTRUCTION EMISSIONS

PROJECT ELEMENT[1]	MAXIMUM DAILY EMISSIONS (LBS/DAY)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Section 3: San Vicente/Santa Monica Station to Hollywood Bowl Station	8	69	149	1	19	9
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023
[1] Construction of the Hollywood Bowl Design Option would happen concurrently with construction of Section 3 of the KNE San Vicente–Fairfax Alignment. As such, daily criteria pollutant emissions associated with concurrent Hollywood Bowl Design Option construction have been included with the alignment's Section 3 daily emissions when determining maximum daily emissions for comparison to the thresholds.
CO = carbon monoxide; lbs/day = pounds per day; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District; SO_X = sulfur oxides; VOC = volatile organic compounds

TABLE 3.3-17. KNE FAIRFAX ALIGNMENT (SECTION 2) WITH HOLLYWOOD BOWL DESIGN OPTION CRITERIA POLLUTANT CONSTRUCTION EMISSIONS

PROJECT ELEMENT[1]	MAXIMUM DAILY EMISSIONS (LBS/DAY)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Section 2: Wilshire/Fairfax Station to Hollywood Bowl Station with MSF Expansion	10	91	195	1	25	12
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023
[1] Construction of the Hollywood Bowl Design Option would happen concurrently with construction of KNE Fairfax Alignment Section 2 and the corresponding MSF expansion. As such, daily criteria pollutant emissions associated with concurrent Hollywood Bowl Design Option construction have been included with the alignment's and the MSF expansion's Section 2 daily emissions when determining maximum daily emissions for comparison to the thresholds.
CO = carbon monoxide; lbs/day = pounds per day; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District; SO_X = sulfur oxides; VOC = volatile organic compounds

TABLE 3.3-18. KNE LA BREA ALIGNMENT (SECTION 2) WITH HOLLYWOOD BOWL DESIGN OPTION CRITERIA POLLUTANT CONSTRUCTION EMISSIONS

PROJECT ELEMENT[1]	MAXIMUM DAILY EMISSIONS (LBS/DAY)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Section 2: Wilshire/La Brea Station to Hollywood Bowl Station with MSF Expansion	11	98	201	1	24	11
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023
[1] Construction of the Hollywood Bowl Design Option would happen concurrently with construction of Section 2 of the KNE La Brea Alignment and the corresponding MSF expansion. As such, daily criteria pollutant emissions associated with concurrent Hollywood Bowl Design Option construction have been included with Section 2 of the alignment's and the MSF expansion's daily emissions when determining maximum daily emissions for comparison to the thresholds.
CO = carbon monoxide; lbs/day = pounds per day; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District; SO_X = sulfur oxides; VOC = volatile organic compounds

As shown in Table 3.3-16, Table 3.3-17, and Table 3.3-18, maximum daily emissions estimates for the Hollywood Bowl Design Option concurrent with Section 2 or Section 3 of the alignments and Section 2 of the MSF construction would be below SCAQMD's mass daily CEQA thresholds.

All construction activities would be conducted in accordance with project measures PM AQ-1, PM AQ-2, and PM AQ-3 to avoid and minimize emissions. Reductions in fugitive dust emissions (affecting PM_{10} and $PM_{2.5}$ emissions) associated with watering as required by SCAQMD Rule 403 (see PM AQ-2) were included in the emission calculations. However, due to uncertainty in the availability of equipment and renewable diesel fuel in the vicinity of the project at the time of construction, emission reductions from other project measures were not accounted for in the construction emission estimates. Therefore, actual construction emissions are expected to be lower than those estimated and, as a result, this analysis is conservative.

While there would be a temporary increase in emissions of criteria pollutants from construction of the Hollywood Bowl Design Option, maximum daily regional emissions would be below SCAQMD CEQA significance thresholds. In accordance with SCAQMD CEQA guidance, because emissions from construction would remain below the project-level CEQA thresholds, the emissions would also be considered less than significant at the cumulatively considerable level (SCAQMD 1993). Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.3.7.2.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. The Hollywood Bowl Design Option would slightly alter the configuration of the light rail alignment and add one underground station. Based on available forecasted travel demand data, implementation of the Hollywood Bowl Design Option would not appreciably increase or decrease ridership of the light rail system, nor would it be expected to appreciably increase or decrease VMT in the RSA relative to the alignments. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.3.7.2.5 MAINTENANCE AND STORAGE FACILITY

3.3.7.2.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction emissions associated with MSF additions would be generated from heavy-duty construction equipment exhaust; fugitive dust (particulate matter) from material movement and ground disturbance; exhaust from worker vehicle travel to and from the MSF site; exhaust from haul trucks and delivery trucks importing and exporting material to the MSF site; and on-road re-entrained dust and brake and tire wear. The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of any alignment. Project activities associated with the MSF would occur in two parts, concurrent with Section 1 and Section 2 of each alignment. Concurrently with Section 1 of the alignment, MSF facility construction would include the addition of four storage tracks on the existing Division 16 site to accommodate increased LRV storage. Concurrently with Section 2 of the alignment, MSF facilities constructed would include expansion of the existing Division 16 MSF on an adjacent 16.5-acre site. Since construction of Section 1 of the alignments and corresponding MSF facilities would occur concurrently, criteria pollutant emissions were considered together when determining maximum daily emissions for comparison to the thresholds. Similarly, criteria pollutant emissions from concurrent construction of Section 2 of the alignments and MSF expansions were considered together when determining maximum daily emissions for comparison to the thresholds.

This analysis assumes that MSF facilities associated with Section 1 and Section 2 would be built sequentially, not concurrently; therefore, maximum daily emissions have been presented and compared to the thresholds separately. If concurrent construction of MSF sections is expected, further analysis will be needed to determine combined air quality impacts. As a result of uncertainty in the timing for construction of each section, 2041 was used as a representative "Year 1" for all sections when calculating criteria pollutant emissions since it is the first anticipated construction year for the project.

In accordance with guidance from SCAQMD, the air quality assessment characterized the maximum mass daily emissions that would occur during construction. The maximum daily emissions represent a reasonably conservative estimate of the highest anticipated daily emissions based on detailed phasing and equipment information developed for the project. Daily emissions were calculated for all construction activities over the entire construction period to determine the maximum daily emissions. While the maximum daily emissions are based on a specific combination of estimated concurrent construction activities, they are considered representative of the worst case over the entire construction period. Therefore, the maximum daily emissions are presented as totals and not broken out by source. Daily activity levels and emissions would fluctuate throughout construction and would be lower on average than the calculated daily maximums.

Table 3.3-19 presents the maximum daily criteria pollutant emissions that would be generated during construction of MSF facilities, including corresponding alignments; it also identifies SCAQMD Air Quality Significance Thresholds for mass daily emissions at the regional level. SCAQMD's guidance states that CEQA projects may emit air pollutants at quantities below the air quality significance thresholds without being considered significant at the project or cumulatively considerable level. Projects that generate emissions in excess of the project-specific thresholds are also considered to be cumulatively considerable and significant.

TABLE 3.3-19. MSF CRITERIA POLLUTANT CONSTRUCTION EMISSIONS

PROJECT ELEMENT/ALIGNMENT[1]	MAXIMUM DAILY EMISSIONS (LBS/DAY)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
MSF Facilities Corresponding to Section 1 with San Vicente–Fairfax Section 1: Expo/Crenshaw to Wilshire/Fairfax Station[2]	3	56	69	0	18	8
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
MSF Expansion Corresponding to Section 2 with San Vicente–Fairfax Section 2: Wilshire/Fairfax to San Vicente/Santa Monica Station[3]	4	60	83	0	17	6
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
MSF Facilities Corresponding to Section 1 with Fairfax Section 1: Expo/Crenshaw to Wilshire/Fairfax Station[2]	3	56	69	0	18	8
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
MSF Expansion Corresponding to Section 2 with Fairfax Section 2: Wilshire/Fairfax to Hollywood/Highland Station[3]	5	91	102	1	29	11
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
MSF Facilities Corresponding to Section 1 with La Brea Section 1: Expo/Crenshaw to Wilshire/La Brea Station[2]	3	58	69	0	18	8
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
MSF Expansion Corresponding to Section 2 with La Brea Alignment Section 2: Wilshire/La Brea Station to Hollywood/Highland Station[3]	5	94	99	1	30	11
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023

[1] The analysis assumes that MSF facilities associated with Section 1 and Section 2 would be built sequentially, not concurrently; therefore, maximum daily emissions have been presented and compared to the thresholds separately. If concurrent construction is expected, further analysis will be needed to determine combined air quality impacts.

[2] The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of any alignment. Section 1 MSF facilities would be constructed concurrently with Section 1 of the alignments and would include the addition of four storage tracks to the existing Division 16 site. As such, daily criteria pollutant emissions associated with this construction have been included with daily emissions for Section 1 of the alignments when determining maximum daily emissions for comparison to the thresholds.

[3] The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of any alignment. MSF expansion would be constructed concurrently with Section 2 of the alignments and would include expansion of the existing Division 16 MSF on the adjacent 16.5-acre site. As such, daily criteria pollutant emissions associated with construction have been included with daily emissions for Section 2 of the alignments when determining maximum daily emissions for comparison to the thresholds.

CO = carbon monoxide; lbs/day = pounds per day; MSF = Maintenance and Storage Facility; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District; SO_X = sulfur oxides; VOC = volatile organic compounds

As shown in Table 3.3-19, maximum daily emissions estimates for MSF facilities along with concurrent construction of Section 1 and Section 2 of the alignments would be below SCAQMD's mass daily CEQA thresholds.

All construction activities would be conducted in accordance with project measures PM AQ-1, PM AQ-2, and PM AQ-3 to avoid and minimize emissions. Reductions in fugitive dust emissions (affecting PM_{10} and $PM_{2.5}$ emissions) associated with watering as required by SCAQMD Rule 403 (see PM AQ-2) were included in the emission calculations. However, due to uncertainty in the availability of equipment and renewable diesel fuel in the vicinity of the project at the time of construction, emission reductions from other project measures were not accounted for in the construction emission estimates. Therefore, actual construction emissions are expected to be lower than those estimated and, as a result, this analysis is conservative.

While there would be a temporary increase in emissions of criteria pollutants from construction of the MSF, maximum daily regional emissions would be below SCAQMD CEQA significance thresholds. In accordance with SCAQMD CEQA guidance, because emissions from construction would remain below the project-level CEQA thresholds, the emissions would also be considered less than significant at the cumulatively considerable level (SCAQMD 1993).Therefore, the MSF would have a less than significant impact during construction.

3.3.7.2.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the MSF would result in emissions of exhaust from equipment used on-site, natural gas use, and use of architectural coatings and consumer products. Use of electrical equipment does not generate air pollutant emissions. Emissions from the exhaust of worker commute trips to and from the MSF are included in the regional traffic emissions estimates. It was assumed that emissions from additional activity associated with additional MSF facilities associated with Section 1 operation at the existing Division 16 MSF site would be minimal since that facility is already in operation and would only require the addition of four storage tracks. Therefore, emissions specific to operations of these facilities would be similar to existing conditions and are not included as a separate line item in Table 3.3-20.

TABLE 3.3-20. MSF OPERATIONAL CRITERIA POLLUTANT EMISSIONS

EMISSION SOURCE	DAILY EMISSIONS (LBS/DAY)					
	VOC	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$
MSF	**1.57**	**2.89**	**0.28**	**0.01**	**0.91**	**0.24**
SCAQMD Threshold	55	550	55	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Connect Los Angeles Partners 2023
CO = carbon monoxide; lbs/day = pounds per day; MSF = maintenance and storage facility; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District; SO_X = sulfur oxides; VOC = volatile organic compounds

As shown in Table 3.3-20, emissions from operation of the MSF would be below all the applicable SCAQMD thresholds. As described above, operation of any of the alignments would result in decreased regional criteria pollutant emissions. The addition of MSF emissions to each of the alignments would not exceed SCAQMD thresholds. Therefore, the MSF would have a less than significant impact during operation.

3.3.7.3 IMPACT AQ-3: EXPOSURE OF SENSITIVE RECEPTORS TO LOCALIZED POLLUTANT CONCENTRATIONS

Impact AQ-3: Would the project expose sensitive receptors to substantial pollutant concentrations?

The following analysis addresses exposure of sensitive receptors to localized concentrations of criteria air pollutants and TACs. According to SCAQMD, land uses that constitute sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. SCAQMD recommends that air quality assessments consider the potential localized impacts to sensitive receptors at distances up to 500 meters (1,640 feet) from project sites, depending on the proximity of sensitive land uses. KNE is located in a developed urban setting near many land uses that qualify as sensitive receptors, including residential land uses, schools, and other institutional uses located along the alignments and near the MSF.

3.3.7.3.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.3.7.3.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE San Vicente–Fairfax Alignment would generate temporary localized emissions from heavy-duty construction equipment exhaust, fugitive dust (particulate matter) from material movement and ground disturbance, exhaust from on-road vehicle travel on-site, and on-road re-entrained dust and brake and tire wear from on-road vehicle travel on-site. Consistent with SCAQMD LST guidance, off-site emissions, such as those from worker vehicle and hauling or delivery vehicle exhaust, were not included in the evaluation of localized impacts. LSTs are only applicable to the following criteria pollutants: NO_X, CO, PM_{10}, and $PM_{2.5}$.

Localized construction emissions were estimated at each of the 10 station construction sites for the alignment. In accordance with guidance from SCAQMD, the air quality assessment characterized the maximum mass daily emissions that would occur during construction at each site. This includes emissions from surface and subsurface activities that would be released at the site. Based on information provided in Section 3.11, Hazards and Hazardous Materials, no emissions of hazardous gases from idle or abandoned oil wells were included in the air quality analysis because any detected gases would be mitigated to a level that would not be considered significant. Maximum daily emissions represent a reasonably conservative estimate of the highest anticipated daily emissions based on detailed phasing and equipment information developed for the alignment. Daily emissions were calculated for all site construction activities over the entire site construction period to determine the maximum daily emissions. While the maximum daily emissions are based on a specific combination of estimated concurrent station construction activities, they are considered representative of the worst case over the

entire site construction period. Therefore, the maximum daily emissions are presented as totals and not broken out by source. Daily activity levels and emissions would fluctuate throughout construction and would be lower on average than the calculated daily maximums.

Construction of each alignment section is anticipated to last up to 12 years; however, due to the linear configuration of the alignment, emissions would be spread across multiple construction staging sites. As a result, localized exposures to sensitive receptors near each site would be shorter in duration and lower in magnitude than for each combined alignment section.

Table 3.3-21 presents the maximum daily criteria pollutant emissions that would be generated at each station site during construction of the alignment, as well as the applicable SCAQMD LSTs. A receptor distance of 25 meters (82 feet) was conservatively assumed to assess station construction localized impacts. Per the SCAQMD LST methodology, the LSTs represent the maximum allowable daily emissions from sources situated on the project site that will not result in the CAAQS being exceeded at sensitive receptor locations (SCAQMD 2009).

As shown in Table 3.3-21, construction of the alignment would result in peak daily on-site emissions that would be less than the SCAQMD LSTs. Construction would also generate temporary localized TAC emissions from on-site use of diesel-fueled heavy-duty construction equipment and on-road trucks in the form of DPM. As described under project measure PM AQ-1, Metro's Green Construction Policy includes measures that would reduce emissions of DPM.

Additionally, Metro's MBSSP includes commitments to use renewable diesel and identify opportunities to decarbonize fuel sources at construction sites, which would further reduce DPM emissions (PM AQ-3). Compliance with the identified project measures, as well as the temporary and intermittent nature of construction activities at any particular location, would prevent the occurrence of substantial TAC concentrations at sensitive receptors during construction of the alignment. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

TABLE 3.3-21. KNE SAN VICENTE–FAIRFAX ALIGNMENT CRITERIA POLLUTANT CONSTRUCTION EMISSIONS – LOCALIZED

PROJECT ELEMENT [1]	MAXIMUM DAILY ON-SITE EMISSIONS (LBS/DAY)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
KNE SAN VICENTE–FAIRFAX ALIGNMENT (SECTION 1)				
Crenshaw/Adams	5	19	3	2
SCAQMD LST Screening Value: 1 acre	103	562	4	3
Threshold Exceeded?	***No***	***No***	***No***	***No***
Midtown Crossing	13	40	5	3
SCAQMD LST Screening Value: 5 acres	221	1,531	13	6
Threshold Exceeded?	***No***	***No***	***No***	***No***
Wilshire/Fairfax	7	21	5	3
SCAQMD LST Screening Value: 3 acres	172	1,062	8	5
Threshold Exceeded?	***No***	***No***	***No***	***No***
Expo/Crenshaw	6	11	3	2
SCAQMD LST Screening Value: 1 acre	103	562	4	3
Threshold Exceeded?	***No***	***No***	***No***	***No***
KNE SAN VICENTE–FAIRFAX ALIGNMENT (SECTION 2)				
Fairfax/3rd	7	21	4	2
SCAQMD LST Screening Value: 4 acres	196	1,296	11	5
Threshold Exceeded?	***No***	***No***	***No***	***No***
La Cienega/Beverly	5	20	3	2
SCAQMD LST Screening Value: 1 acre	103	562	4	3
Threshold Exceeded?	***No***	***No***	***No***	***No***
San Vicente/Santa Monica	13	27	4	2
SCAQMD LST Screening Value: 3 acres	172	1,062	8	5
Threshold Exceeded?	***No***	***No***	***No***	***No***
KNE SAN VICENTE–FAIRFAX ALIGNMENT (SECTION 3)				
Fairfax/Santa Monica	5	20	3	2
SCAQMD LST Screening Value: 1 acre	103	562	4	3
Threshold Exceeded?	***No***	***No***	***No***	***No***
La Brea/Santa Monica	14	28	4	3
SCAQMD LST Screening Value: 4 acres	196	1,296	11	5
Threshold Exceeded?	***No***	***No***	***No***	***No***

PROJECT ELEMENT [1]	MAXIMUM DAILY ON-SITE EMISSIONS (LBS/DAY)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Hollywood/Highland	13	28	6	4
SCAQMD LST Screening Value: 2 acres	147	827	6	4
Threshold Exceeded?	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023
[1] LSTs taken from Table 3.3-3 for SRA 2 – Northwest Coastal Los Angeles County, 25 meter (82 foot) receptor distance, and site size identified for each station.
CO = carbon monoxide; lbs/day = pounds per day; LST = Localized Significance Threshold; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District

3.3.7.3.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE San Vicente–Fairfax Alignment would not introduce a new substantial permanent direct source of air pollutant emissions to the RSA. No direct source of air pollutant emissions would occur along the alignment because the LRVs would be powered by electricity. Station operations would also be electrically powered, and the stations would not have designated parking. The small amount of rider-related vehicle trips to and from the stations are included in the regional VMT forecasts. These vehicles are typically gasoline-powered and would not expose sensitive receptors to substantial TAC concentrations. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.3.7.3.2 KNE FAIRFAX ALIGNMENT

3.3.7.3.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE Fairfax Alignment would generate temporary localized emissions from heavy-duty construction equipment exhaust, fugitive dust (particulate matter) from material movement and ground disturbance, exhaust from on-road vehicle travel on-site, and on-road re-entrained dust and brake and tire wear from on-road vehicle travel on-site. Consistent with SCAQMD LST guidance, off-site emissions, such as those from worker vehicle and hauling or delivery vehicle exhaust, were not included in the evaluation of localized impacts. LSTs are only applicable to the following criteria pollutants: NO_X, CO, PM_{10}, and $PM_{2.5}$.

Localized construction emissions were estimated at each of the eight station construction sites for the alignment. In accordance with guidance from SCAQMD, the air quality assessment characterized the maximum mass daily emissions that would occur during construction at each site. This includes emissions from surface and subsurface activities that would be released at the site. Based on information provided in Section 3.11, Hazards and Hazardous Materials, no emissions of hazardous gases from idle or abandoned oil wells were included in the air quality analysis because any detected gases would be mitigated to a level that would not be considered significant. Maximum daily emissions represent a reasonably conservative estimate of the highest anticipated daily emissions based on detailed phasing and equipment information developed for the alignment. Daily emissions were calculated for all site

construction activities over the entire site construction period to determine the maximum daily emissions. While the maximum daily emissions are based on a specific combination of estimated concurrent station construction activities, they are considered representative of the worst case over the entire site construction period. Therefore, the maximum daily emissions are presented as totals and not broken out by source. Daily activity levels and emissions would fluctuate throughout construction and would be lower on average than the calculated daily maximums.

Construction of each alignment section is anticipated to last up to 12 years; however, due to the linear configuration of the alignment, emissions would be spread across multiple construction staging sites. As a result, localized exposures to sensitive receptors near each site would be shorter in duration and lower in magnitude than for each combined alignment section.

Table 3.3-22 presents the maximum daily criteria pollutant emissions that would be generated at each station site during construction of the alignment, as well as the applicable SCAQMD LSTs. A receptor distance of 25 meters (82 feet) was conservatively assumed to assess station construction localized impacts. Per the SCAQMD LST methodology, the LSTs represent the maximum allowable daily emissions from sources situated on the project site that will not result in the CAAQS being exceeded at sensitive receptor locations (SCAQMD 2009). As shown in Table 3.3-22, construction of the alignment would result in peak daily on-site emissions that would be less than the SCAQMD LSTs. Construction would also generate temporary localized TAC emissions from on-site use of diesel-fueled heavy-duty construction equipment and on-road trucks in the form of DPM. As described under project measure PM AQ-1, Metro's Green Construction Policy includes measures that would reduce emissions of DPM.

Additionally, Metro's MBSSP includes commitments to use renewable diesel and identify opportunities to decarbonize fuel sources at construction sites, which would further reduce DPM emissions (PM AQ-3). Compliance with the identified project measures, as well as the temporary and intermittent nature of construction activities at any particular location, would prevent the occurrence of substantial TAC concentrations at sensitive receptors during construction of the alignment. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

TABLE 3.3-22. KNE FAIRFAX ALIGNMENT CRITERIA POLLUTANT CONSTRUCTION EMISSIONS – LOCALIZED

PROJECT ELEMENT[1]	MAXIMUM DAILY ON-SITE EMISSIONS (LBS/DAY)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
KNE FAIRFAX ALIGNMENT (SECTION 1)				
Crenshaw/Adams	5	19	3	2
SCAQMD LST Screening Value: 1 acre	103	562	4	3
Threshold Exceeded?	***No***	***No***	***No***	***No***
Midtown Crossing	13	40	5	3
SCAQMD LST Screening Value: 5 acres	221	1,531	13	6
Threshold Exceeded?	***No***	***No***	***No***	***No***
Wilshire/Fairfax	7	21	5	3
SCAQMD LST Screening Value: 3 acres	172	1,062	8	5
Threshold Exceeded?	***No***	***No***	***No***	***No***
Expo/Crenshaw	6	11	3	2
SCAQMD LST Screening Value: 1 acre	103	562	4	3
Threshold Exceeded?	***No***	***No***	***No***	***No***
KNE FAIRFAX ALIGNMENT (SECTION 2)				
Fairfax/3rd	8	18	4	2
SCAQMD LST Screening Value: 4 acres	196	1,296	11	5
Threshold Exceeded?	***No***	***No***	***No***	***No***
Fairfax/Santa Monica	5	20	3	2
SCAQMD LST Screening Value: 1 acre	103	562	4	3
Threshold Exceeded?	***No***	***No***	***No***	***No***
La Brea/Santa Monica	12	30	4	3
SCAQMD LST Screening Value: 4 acres	196	1,296	11	5
Threshold Exceeded?	***No***	***No***	***No***	***No***
Hollywood/Highland	13	28	6	4
SCAQMD LST Screening Value: 2 acres	147	827	6	4
Threshold Exceeded?	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023

[1] LSTs taken from Table 3.3-3 for SRA 2 – Northwest Coastal Los Angeles County, 25 meter (82 foot) receptor distance, and site size identified for each station.

CO = carbon monoxide; lbs/day = pounds per day; LST = Localized Significance Threshold; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District

3.3.7.3.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE Fairfax Alignment would not introduce a new substantial permanent direct source of air pollutant emissions to the RSA. No direct source of air pollutant emissions would occur along the alignment because the LRVs would be powered by electricity. Station operations would also be electrically powered, and the stations would not have designated parking. The small amount of rider-related vehicle trips to and from the stations are included in the regional VMT forecasts. These vehicles are typically gasoline-powered and would not expose sensitive receptors to substantial TAC concentrations. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.3.7.3.3 KNE LA BREA ALIGNMENT

3.3.7.3.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE La Brea Alignment would generate temporary localized emissions from heavy-duty construction equipment exhaust, fugitive dust (particulate matter) from material movement and ground disturbance, exhaust from on-road vehicle travel on-site, and on-road re-entrained dust and brake and tire wear from on-road vehicle travel on-site. Consistent with SCAQMD LST guidance, off-site emissions, such as those from worker vehicle and hauling or delivery vehicle exhaust, were not included in the evaluation of localized impacts. LSTs are only applicable to the following criteria pollutants: NO_X, CO, PM_{10}, and $PM_{2.5}$.

Localized construction emissions were estimated at each of the six station construction sites for the alignment. In accordance with guidance from SCAQMD, the air quality assessment characterized the maximum mass daily emissions that would occur during construction at each site. This includes emissions from surface and subsurface activities that would be released at the site. Based on information provided in Section 3.11, Hazards and Hazardous Materials, no emissions of hazardous gases from idle or abandoned oil wells were included in the air quality analysis because any detected gases would be mitigated to a level that would not be considered significant. Maximum daily emissions represent a reasonably conservative estimate of the highest anticipated daily emissions based on detailed phasing and equipment information developed for the alignment. Daily emissions were calculated for all site construction activities over the entire site construction period to determine the maximum daily emissions. While the maximum daily emissions are based on a specific combination of estimated concurrent station construction activities, they are considered representative of the worst case over the entire site construction period. Therefore, the maximum daily emissions are presented as totals and not broken out by source. Daily activity levels and emissions would fluctuate throughout construction and would be lower on average than the calculated daily maximums.

Construction of each alignment section is anticipated to last up to 11 years; however, due to the linear configuration of the alignment, emissions would be spread across multiple construction staging sites. As a result, localized exposures to sensitive receptors near each site would be shorter in duration and lower in magnitude than for each combined alignment section.

Table 3.3-23 presents the maximum daily criteria pollutant emissions that would be generated at each station site during construction of the alignment, as well as the applicable SCAQMD LSTs. A receptor distance of 25 meters (82 feet) was conservatively assumed to assess station construction localized impacts. Per the SCAQMD LST methodology, the LSTs represent the maximum allowable daily emissions from sources situated on the project site that will not result in the CAAQS being exceeded at sensitive receptor locations (SCAQMD 2009).

TABLE 3.3-23. KNE LA BREA ALIGNMENT CRITERIA POLLUTANT CONSTRUCTION EMISSIONS – LOCALIZED

PROJECT ELEMENT[1]	MAXIMUM DAILY ON-SITE EMISSIONS (LBS/DAY)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
KNE LA BREA ALIGNMENT (SECTION 1)				
Crenshaw/Adams	5	19	3	2
SCAQMD LST Screening Value: 1 acre	103	562	4	3
Threshold Exceeded?	***No***	***No***	***No***	***No***
Midtown Crossing	12	41	5	3
SCAQMD LST Screening Value: 5 acres	221	1,531	13	6
Threshold Exceeded?	***No***	***No***	***No***	***No***
Wilshire/La Brea	7	20	4	2
SCAQMD LST Screening Value: 2 acres	147	827	6	4
Threshold Exceeded?	***No***	***No***	***No***	***No***
Expo/Crenshaw	6	11	3	2
SCAQMD LST Screening Value: 1 acre	103	562	4	3
Threshold Exceeded?	***No***	***No***	***No***	***No***
KNE LA BREA ALIGNMENT (SECTION 2)				
La Brea/Beverly	5	20	3	2
SCAQMD LST Screening Value: 1 acre	103	562	4	3
Threshold Exceeded?	***No***	***No***	***No***	***No***
La Brea/Santa Monica	13	27	4	3
SCAQMD LST Screening Value: 4 acres	196	1,296	11	5
Threshold Exceeded?	***No***	***No***	***No***	***No***
Hollywood/Highland	13	28	6	4
SCAQMD LST Screening Value: 2 acres	147	827	6	4
Threshold Exceeded?	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023
[1] LSTs taken from Table 3.3-3 for SRA 2 – Northwest Coastal Los Angeles County, 25 meter (82 foot) receptor distance, and site size identified for each station.
CO = carbon monoxide; lbs/day = pounds per day; LST = Localized Significance Threshold; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District

As shown in Table 3.3-23, construction of the alignment would result in peak daily on-site emissions that would be less than the SCAQMD LSTs. Construction would also generate temporary localized TAC emissions from on-site use of diesel-fueled heavy-duty construction equipment and on-road trucks in the form of DPM. As described under project measure PM AQ-1, Metro's Green Construction Policy includes measures that would reduce emissions of DPM.

Additionally, Metro's MBSSP includes commitments to use renewable diesel and identify opportunities to decarbonize fuel sources at construction sites, which would further reduce DPM emissions (PM AQ-3). Compliance with the identified project measures, as well as the temporary and intermittent nature of construction activities at any particular location, would prevent the occurrence of substantial TAC concentrations at sensitive receptors during construction of the alignment. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.3.7.3.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE La Brea Alignment would not introduce a new substantial permanent direct source of air pollutant emissions to the RSA. No direct source of air pollutant emissions would occur along the alignment because the LRVs would be powered by electricity. Station operations would also be electrically powered, and the stations would not have designated parking. The small amount of rider-related vehicle trips to and from the stations are included in the regional VMT forecasts. These vehicles are typically gasoline-powered and would not expose sensitive receptors to substantial TAC concentrations. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.3.7.3.4 HOLLYWOOD BOWL DESIGN OPTION

3.3.7.3.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The Hollywood Bowl Design Option changes the proposed Hollywood/Highland Station from a terminus station to an in-line station and adds a new Hollywood Bowl terminus station to the final section of each alignment (Section 3 of the KNE San Vicente–Fairfax Alignment; Section 2 of the KNE Fairfax Alignment and the KNE La Brea Alignment). In order to capture these changes, criteria pollutant emissions were recalculated for the final section of each alignment to include construction of the Hollywood Bowl Design Option. Construction of other sections (Section 1 and Section 2 for the KNE San Vicente–Fairfax Alignment; Section 1 for the KNE Fairfax Alignment and KNE La Brea Alignment) would not be affected by the addition of the Hollywood Bowl Design Option to the final sections.

Construction of the Hollywood Bowl Design Option would generate temporary localized emissions from heavy-duty construction equipment exhaust, fugitive dust (particulate matter) from material movement and ground disturbance, exhaust from on-road vehicle travel on-site, and on-road re-entrained dust and brake and tire wear from on-road vehicle travel on-site. Consistent with SCAQMD LST guidance, off-site emissions, such as those from worker vehicle and hauling or delivery vehicle exhaust, were not included in the evaluation of localized impacts. LSTs are only applicable to the following criteria pollutants: NO_X, CO, PM_{10}, and $PM_{2.5}$.

Localized construction emissions were estimated at the Hollywood Bowl construction site and each of the other station sites in the final section of each alignment (Section 3 of the KNE San Vicente–Fairfax Alignment; Section 2 of the KNE Fairfax Alignment and KNE La Brea Alignment). The addition of the Hollywood Bowl Design Option would change the construction schedule for the affected sections, potentially affecting emissions at the other station sites.

In accordance with guidance from SCAQMD, the air quality assessment characterized the maximum mass daily emissions that would occur during construction at each site. This includes emissions from surface and subsurface activities that would be released at the site. Maximum daily emissions represent a reasonably conservative estimate of the highest anticipated daily emissions based on detailed phasing and equipment information developed for the project. Daily emissions were calculated for all site construction activities over the entire site construction period to determine the maximum daily emissions. While the maximum daily emissions are based on a specific combination of estimated concurrent station construction activities, they are considered representative of the worst case over the entire site construction period. Therefore, the maximum daily emissions are presented as totals and not broken out by source. Daily activity levels and emissions would fluctuate throughout construction and would be lower on average than the calculated daily maximums. Construction at the Hollywood Bowl site is anticipated to occur intermittently over approximately eight years.

Table 3.3-24, Table 3.3-25, and Table 3.3-26 present the maximum daily criteria pollutant emissions that would be generated during construction at the Hollywood Bowl construction site and each of the other station sites in the final section of each alignment, as well as the applicable SCAQMD LSTs. A receptor distance of 25 meters (82 feet) was conservatively assumed to assess station construction localized impacts. Per the SCAQMD LST methodology, the LSTs represent the maximum allowable daily emissions from sources situated on the project site that will not result in the CAAQS being exceeded at sensitive receptor locations (SCAQMD 2009).

As shown in Table 3.3-24, Table 3.3-25, and Table 3.3-26, construction of the design option would result in peak daily on-site emissions that would be less than the SCAQMD LSTs. Construction would also generate temporary localized TAC emissions from on-site use of diesel-fueled heavy-duty construction equipment and on-road trucks in the form of DPM. As described under project measure PM AQ-1, Metro's Green Construction Policy includes measures that would reduce emissions of DPM.

Additionally, Metro's MBSSP includes commitments to use renewable diesel and identify opportunities to decarbonize fuel sources at construction sites, which would further reduce DPM emissions (PM AQ-3). Compliance with the identified project measures, as well as the temporary and intermittent nature of construction activities at any particular location, would prevent the occurrence of substantial TAC concentrations at sensitive receptors during construction of the alignment. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

TABLE 3.3-24. HOLLYWOOD BOWL DESIGN OPTION CRITERIA POLLUTANT CONSTRUCTION EMISSIONS WITH KNE SAN VICENTE–FAIRFAX ALIGNMENT – LOCALIZED

PROJECT ELEMENT[1]	MAXIMUM DAILY ON-SITE EMISSIONS (LBS/DAY)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
HOLLYWOOD BOWL DESIGN OPTION, KNE SAN VICENTE–FAIRFAX ALIGNMENT (SECTION 3)				
Fairfax/Santa Monica	5	20	3	2
SCAQMD LST Screening Value: 1 acre	103	562	4	3
Threshold Exceeded?	***No***	***No***	***No***	***No***
La Brea/Santa Monica	12	27	4	3
SCAQMD LST Screening Value: 4 acres	196	1,296	11	5
Threshold Exceeded?	***No***	***No***	***No***	***No***
Hollywood/Highland	10	27	3	2
SCAQMD LST Screening Value: 2 acres	147	827	6	4
Threshold Exceeded?	***No***	***No***	***No***	***No***
Hollywood Bowl	39	100	6	4
SCAQMD LST Screening Value: 4 acres	196	1,296	11	5
Threshold Exceeded?	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023
[1] LSTs taken from Table 3.3-3 for SRA 2 – Northwest Coastal Los Angeles County, 25 meter (82 foot) receptor distance, and site size identified for each station.
CO = carbon monoxide; lbs/day = pounds per day; LST = Localized Significance Threshold; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter;
SCAQMD = South Coast Air Quality Management District

TABLE 3.3-25. HOLLYWOOD BOWL DESIGN OPTION CRITERIA POLLUTANT CONSTRUCTION EMISSIONS WITH KNE FAIRFAX ALIGNMENT – LOCALIZED

PROJECT ELEMENT[1]	MAXIMUM DAILY ON-SITE EMISSIONS (LBS/DAY)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
HOLLYWOOD BOWL DESIGN OPTION, KNE FAIRFAX ALIGNMENT (SECTION 2)				
Fairfax/3rd	7	20	3	2
SCAQMD LST Screening Value: 4 acres	196	1,296	11	5
Threshold Exceeded?	***No***	***No***	***No***	***No***
Fairfax/Santa Monica	7	21	4	2
SCAQMD LST Screening Value: 1 acre	103	562	4	3
Threshold Exceeded?	***No***	***No***	***No***	***No***
La Brea/Santa Monica	11	29	4	3
SCAQMD LST Screening Value: 4 acres	196	1,296	11	5
Threshold Exceeded?	***No***	***No***	***No***	***No***
Hollywood/Highland	10	27	3	2
SCAQMD LST Screening Value: 2 acres	147	827	6	4
Threshold Exceeded?	***No***	***No***	***No***	***No***
Hollywood Bowl	37	96	6	4
SCAQMD LST Screening Value: 4 acres	196	1,296	11	5
Threshold Exceeded?	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023
[1] LSTs taken from Table 3.3-3 for SRA 2 – Northwest Coastal Los Angeles County, 25 meter (82 foot) receptor distance, and site size identified for each station.
CO = carbon monoxide; lbs/day = pounds per day; LST = Localized Significance Threshold; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter;
SCAQMD = South Coast Air Quality Management District

TABLE 3.3-26. HOLLYWOOD BOWL DESIGN OPTION SITE CRITERIA POLLUTANT CONSTRUCTION EMISSIONS WITH KNE LA BREA ALIGNMENT – LOCALIZED

PROJECT ELEMENT[1]	MAXIMUM DAILY ON-SITE EMISSIONS (LBS/DAY)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
HOLLYWOOD BOWL DESIGN OPTION, KNE LA BREA ALIGNMENT (SECTION 2)				
La Brea/Beverly	5	20	3	2
SCAQMD LST Screening Value: 1 acre	103	562	4	3
Threshold Exceeded?	***No***	***No***	***No***	***No***
La Brea/Santa Monica	12	28	4	2
SCAQMD LST Screening Value: 4 acres	196	1,296	11	5
Threshold Exceeded?	***No***	***No***	***No***	***No***
Hollywood/Highland	10	27	3	2
SCAQMD LST Screening Value: 2 acres	147	827	6	4
Threshold Exceeded?	***No***	***No***	***No***	***No***
Hollywood Bowl	49	127	7	5
SCAQMD LST Screening Value: 4 acres	196	1,296	11	5
Threshold Exceeded?	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023
[1] LSTs taken from Table 3.3-3 for SRA 2 – Northwest Coastal Los Angeles County, 25 meter (82 foot) receptor distance, and site size identified for each station.
CO = carbon monoxide; lbs/day = pounds per day; LST = Localized Significance Threshold; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter;
SCAQMD = South Coast Air Quality Management District

3.3.7.3.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the Hollywood Bowl Design Option would not introduce a new substantial permanent direct source of air pollutant emissions to the RSA. No direct source of air pollutant emissions would occur along the additional alignment from the Hollywood/Highland Station to the Hollywood Bowl Station because the LRVs would be powered by electricity. Station operations would also be electrically powered, and the Hollywood Bowl Station would not have designated parking. The small amount of rider-related vehicle trips to and from the Hollywood Bowl Station are included in the regional VMT forecasts. These vehicles are typically gasoline-powered and would not expose sensitive receptors to substantial TAC concentrations. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.3.7.3.5 MAINTENANCE AND STORAGE FACILITY

3.3.7.3.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of any alignment. Construction of the MSF would generate temporary localized emissions from heavy-duty construction equipment exhaust, fugitive dust (particulate matter) from material movement and ground disturbance, exhaust from on-road vehicle travel on-site, and on-road re-entrained dust and brake and tire wear from on-road vehicle travel on-site. Consistent with SCAQMD LST guidance, off-site emissions, such as those from worker vehicle and hauling or delivery vehicle exhaust, were not included in the evaluation of localized impacts. LSTs are only applicable to the following criteria pollutants: NO_X, CO, PM_{10}, and $PM_{2.5}$.

Localized construction emissions from the addition of the four storage tracks to the existing Division 16 MSF as part of Section 1 and the expansion of the existing Division 16 MSF on the adjacent 16.5-acre site as part of Section 2 were estimated for each alignment and the Hollywood Bowl Design Option where the design option would be constructed as part of Section 2 (KNE Fairfax Alignment and KNE La Brea Alignment). The construction schedules for the Section 1 MSF facilities and for the MSF expansion associated with Section 2 would differ between alignments and with the addition of the Hollywood Bowl Design Option, potentially affecting emissions at the MSF site.

In accordance with guidance from SCAQMD, the air quality assessment characterized the maximum mass daily emissions that would occur at the site during construction. Maximum daily emissions represent a reasonably conservative estimate of the highest anticipated daily emissions based on detailed phasing and equipment information developed for the MSF. Daily emissions were calculated for all MSF construction activities over the entire MSF construction period for each section to determine the maximum daily emissions. While the maximum daily emissions are based on a specific combination of estimated concurrent construction activities, they are considered representative of the worst case over the entire MSF section construction period. Therefore, the maximum daily emissions are presented as totals and are not broken out by source. Daily activity levels and emissions would fluctuate throughout construction and would be lower on average than the calculated daily maximums.

Construction at the MSF site is anticipated to occur over approximately one year for MSF facilities associated with Section 1 and up to five years for the MSF expansion concurrent with Section 2. See Appendix 2-C, Construction Approach Report, for construction details.

Table 3.3-27 presents the maximum daily criteria pollutant emissions that would be generated during construction of MSF facilities associated with Section 1 and MSF expansion associated with Section 2 for each KNE alignment and the Hollywood Bowl Design Option, as well as the applicable SCAQMD LSTs. As described above, LSTs for a site size of one acre were used for Section 1 MSF facilities, and LSTs for a site size of five acres were used for MSF expansion associated with Section 2. LSTs for a receptor distance of 100 meters (328 feet) were used based on the location of the closest sensitive receptors to the MSF site. Per the SCAQMD LST methodology, the LSTs represent the maximum allowable daily emissions from sources on the project site that will not result in the CAAQS being exceeded at sensitive receptor locations (SCAQMD 2009).

TABLE 3.3-27. MSF CRITERIA POLLUTANT CONSTRUCTION EMISSIONS – LOCALIZED

PROJECT ELEMENT[1,2]	MAXIMUM DAILY ON-SITE EMISSIONS (LBS/DAY)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
MSF, KNE SAN VICENTE–FAIRFAX ALIGNMENT				
MSF Facilities (Section 1)	2	8	2	1
SCAQMD LST Screening Value: 1 acre	121	1,233	27	8
Threshold Exceeded?	***No***	***No***	***No***	***No***
MSF Expansion (Section 2)	6	21	3	3
SCAQMD LST Screening Value: 5 acres	226	2,762	55	14
Threshold Exceeded?	***No***	***No***	***No***	***No***
MSF, KNE FAIRFAX ALIGNMENT				
MSF Facilities (Section 1)	2	8	2	1
SCAQMD LST Screening Value: 1 acre	121	1,233	27	8
Threshold Exceeded?	***No***	***No***	***No***	***No***
MSF Expansion (Section 2)	6	21	4	3
SCAQMD LST Screening Value: 5 acres	226	2,762	55	14
Threshold Exceeded?	***No***	***No***	***No***	***No***
MSF Expansion, Hollywood Bowl (Section 2)	6	21	4	3
SCAQMD LST Screening Value: 5 acres	226	2,762	55	14
Threshold Exceeded?	***No***	***No***	***No***	***No***
MSF, KNE LA BREA ALIGNMENT				
MSF Facilities (Section 1)	2	8	2	1
SCAQMD LST Screening Value: 1 acre	121	1,233	27	8
Threshold Exceeded?	***No***	***No***	***No***	***No***
MSF Expansion (Section 2)	6	21	4	3
SCAQMD LST Screening Value: 5 acres	226	2,762	55	14
Threshold Exceeded?	***No***	***No***	***No***	***No***
MSF Expansion, Hollywood Bowl (Section 2)	6	21	4	3
SCAQMD LST Screening Value: 5 acres	226	2,762	55	14
Threshold Exceeded?	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023

[1] Although the MSF infrastructure is the same across alignments, variations in construction schedules can result in differences in emissions.

[2] LSTs taken from Table 3.3-3 for SRA 2 – Northwest Coastal Los Angeles County and a 100 meter (328 foot) receptor distance. Up to one acre would be disturbed for MSF facilities associated with Section 1 (the addition of four storage tracks to the existing Division 16 MSF site). A maximum daily disturbed area of five acres was assumed for MSF Division 16 expansion associated with Section 2.

CO = carbon monoxide; lbs/day = pounds per day; LST = Localized Significance Threshold; MSF = Maintenance and Storage Facility; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District

As shown in Table 3.3-27, construction activities at the MSF site would result in peak daily on-site emissions that would be less than the SCAQMD LSTs and would not expose sensitive receptors to substantial localized criteria pollutant concentrations. Construction activities would also generate temporary localized TAC emissions from on-site use of diesel-fueled heavy-duty construction equipment and on-road trucks in the form of DPM. As described under project measure PM AQ-1, Metro's Green Construction Policy includes measures that would reduce emissions of DPM.

Additionally, Metro's MBSSP includes commitments to use renewable diesel and identify opportunities to decarbonize fuel sources at construction sites, which would further reduce DPM emissions (PM AQ-3). Compliance with the identified project measures, as well as the temporary and intermittent nature of construction activities at any particular location, would prevent the occurrence of substantial TAC concentrations at sensitive receptors during construction at the MSF site. Construction of the MSF would not expose sensitive receptors to substantial localized TAC concentrations. Therefore, the MSF would have a less than significant impact during construction.

3.3.7.3.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the MSF would not introduce a new substantial permanent direct source of air pollutant emissions to the RSA. However, operation of the MSF would result in criteria pollutant emissions from combustion of natural gas for heating and cooling and from activities required for maintenance and upkeep of the structures and LRVs. Use of electrical equipment does not generate air pollutant emissions. It was assumed that emissions from additional activity associated with operational activities for MSF facilities associated with Section 1 at the existing Division 16 MSF site would be minimal since that facility is already in operation and would only require the addition of four storage tracks to accommodate Section 1 of the alignments. Therefore, emissions specific to these facilities would be similar to existing conditions and are not included as a separate line item in Table 3.3-28. Emissions from operation of the MSF would comply with all SCAQMD air permitting regulations, which include an analysis of potential localized pollutant concentrations.

TABLE 3.3-28. MSF OPERATIONAL CRITERIA POLLUTANT EMISSIONS – LOCALIZED

	DAILY ON-SITE EMISSIONS (LBS/DAY)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
MSF On-Site Emissions	0.28	2.89	0.91	0.24
SCAQMD LST Screening Value	121	1,233	7	2
Threshold Exceeded?	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023
CO = carbon monoxide; lbs/day = pounds per day; LST = Localized Significance Threshold; MSF = Maintenance and Storage Facility; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District

Consistent with SCAQMD LST guidance, off-site emissions, such as those from worker vehicle exhaust, were not included in the evaluation of localized criteria pollutant impacts. LSTs are only applicable to the following criteria pollutants: NO_X, CO, PM_{10}, and $PM_{2.5}$.

Table 3.3-28 presents the daily criteria pollutant emissions that would be generated during operation of the MSF expansion onto the adjacent 16.5-acre site as part of Section 2, as well as the applicable SCAQMD LSTs. As described above, LSTs for a one-acre site with a receptor distance of 100 meters (328 feet) were used to assess MSF operational impacts. Per the SCAQMD LST methodology, the LSTs represent the maximum allowable daily emissions from sources on the project site that will not result in the CAAQS being exceeded at sensitive receptor locations (SCAQMD 2009).

As shown in Table 3.3-28, operation of the MSF would result in peak daily on-site emissions that would be less than the SCAQMD LSTs, and impacts with respect to exposure of sensitive receptors to localized criteria pollutant concentrations would not be substantial.

Employee commute vehicle trips to and from the MSF are included in the regional VMT forecasts. These vehicles are typically gasoline-powered and would not expose sensitive receptors to substantial TAC concentrations. Therefore, the MSF would have a less than significant impact during operation.

3.3.7.4 IMPACT AQ-4: OTHER EMISSIONS

Impact AQ-4: Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

3.3.7.4.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.3.7.4.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Other construction emission sources under the KNE San Vicente–Fairfax Alignment with the potential to adversely affect a substantial number of people include diesel vehicle exhaust, which has a distinctive odor. Diesel-fueled equipment used during construction would have the potential to generate odors that may be considered unpleasant. Construction of each alignment section is anticipated to last up to 12 years; however, due to the linear configuration of the alignment, emissions would be spread across multiple construction staging sites. As a result, people's exposure to potential unpleasant construction-related odors near each site would be shorter in duration than the time required to construct each alignment section and would cease upon completion of construction activities at that site. See Appendix 2-C, Construction Approach Report, for construction details. Additionally, the project measures identified under Impact AQ-3 for the reduction of DPM emissions from diesel-fueled equipment would be effective in limiting odor impacts from diesel construction equipment exhaust. Due to the temporary and highly mobile nature of alignment construction and the implementation of project measures to reduce emissions from diesel-fueled equipment, the alignment would not result in other emissions, such as those leading to unpleasant odors, that would adversely affect a substantial number of people. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.3.7.4.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. Other operational emission sources under the KNE San Vicente–Fairfax Alignment with the potential to adversely affect a substantial number of people include waste from

passengers accessing the stations, which could have an unpleasant odor. SCAQMD has established Rule 402 (Nuisance), which avoids nuisance odor conditions through the establishment of odor complaint tracking systems and other requirements. Typical sources of potential nuisance odors include agricultural uses, wastewater treatment facilities, food processing and chemical plants, landfills, and refineries, none of which are associated with the alignment. Trash receptacles at stations would be a minor source of odors and would be subject to regular servicing, maintenance, and cleaning to prevent unpleasant odors at the stations, and they would not result in unpleasant odors that adversely affect a substantial number of people. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.3.7.4.2 KNE FAIRFAX ALIGNMENT

3.3.7.4.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Other construction emission sources under the KNE Fairfax Alignment with the potential to adversely affect a substantial number of people include diesel vehicle exhaust, which has a distinctive odor. Diesel-fueled equipment used during construction would have the potential to generate odors that may be considered unpleasant. Construction of each alignment section is anticipated to last up to 12 years; however, due to the linear configuration of the alignment, emissions would be spread across multiple construction staging sites. As a result, people's exposure to potential unpleasant construction-related odors near each site would be shorter in duration than the time required to construct each alignment section and would cease upon completion of construction activities at that site. See Appendix 2-C, Construction Approach Report, for construction details. Additionally, the project measures identified under Impact AQ-3 for the reduction of DPM emissions from diesel-fueled equipment would be effective in limiting odor impacts from diesel construction equipment exhaust. Due to the temporary and highly mobile nature of alignment construction and the implementation of project measures to reduce emissions from diesel-fueled equipment, the alignment would not result in other emissions, such as those leading to unpleasant odors, that would adversely affect a substantial number of people. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.3.7.4.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. Other operational emission sources under the KNE Fairfax Alignment with the potential to adversely affect a substantial number of people include waste from passengers accessing the stations, which could have an unpleasant odor. SCAQMD has established Rule 402 (Nuisance), which avoids nuisance odor conditions through the establishment of odor complaint tracking systems and other requirements. Typical sources of potential nuisance odors include agricultural uses, wastewater treatment facilities, food processing and chemical plants, landfills, and refineries, none of which are associated with the project. Trash receptacles at stations would be a minor source of odors and would be subject to regular servicing, maintenance, and cleaning to prevent unpleasant odors at the stations. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.3.7.4.3 KNE LA BREA ALIGNMENT

3.3.7.4.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Other construction emission sources under the KNE La Brea Alignment with the potential to adversely affect a substantial number of people include diesel vehicle exhaust, which has a distinctive odor. Diesel-fueled equipment used during construction would have the potential to generate odors that may be considered unpleasant. Construction of each alignment section is anticipated to last eight to 10 years; however, due to the linear configuration of the alignment, emissions would be spread across multiple construction staging sites. As a result, people's exposure to potential unpleasant construction-related odors near each site would be shorter in duration than the time required to construct each alignment section and would cease upon completion of construction activities at that site. See Appendix 2-C, Construction Approach Report, for construction details. Additionally, the project measures identified under Impact AQ-3 for the reduction of DPM emissions from diesel-fueled equipment would be effective in limiting odor impacts from diesel construction equipment exhaust. Due to the temporary and highly mobile nature of alignment construction and the implementation of project measures to reduce emissions from diesel-fueled equipment, the alignment would not result in other emissions, such as those leading to unpleasant odors, that would adversely affect a substantial number of people. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.3.7.4.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. Other operational emission sources under the KNE La Brea Alignment with the potential to adversely affect a substantial number of people include waste from passengers accessing the stations, which could have an unpleasant odor. SCAQMD has established Rule 402 (Nuisance), which avoids nuisance odor conditions through the establishment of odor complaint tracking systems and other requirements. Typical sources of potential nuisance odors include agricultural uses, wastewater treatment facilities, food processing and chemical plants, landfills, and refineries, none of which are associated with the project. Trash receptacles at stations would be a minor source of odors and would be subject to regular servicing, maintenance, and cleaning to prevent unpleasant odors at the stations. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.3.7.4.4 HOLLYWOOD BOWL DESIGN OPTION

3.3.7.4.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Other construction emission sources under the Hollywood Bowl Design Option with the potential to adversely affect a substantial number of people include diesel vehicle exhaust, which has a distinctive odor. Diesel-fueled equipment used during construction would have the potential to generate odors that may be considered unpleasant. Construction at the Hollywood Bowl site is anticipated to occur intermittently over approximately 10 years and would cease upon completion of construction activities. People's exposure to potential unpleasant construction-related odors near the site

would vary over the duration of construction based on the type of construction activity. See Appendix 2-C, Construction Approach Report, for construction details.

Additionally, the project measures identified under Impact AQ-3 for the reduction of DPM emissions from diesel-fueled equipment would be effective in limiting odor impacts from diesel construction equipment exhaust. Due to the temporary nature of design option construction and the implementation of project measures to reduce emissions from diesel-fueled equipment, the Hollywood Bowl Design Option would not result in other emissions, such as those leading to unpleasant odors, that would adversely affect a substantial number of people. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.3.7.4.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. Other operational emission sources under the Hollywood Bowl Design Option with the potential to adversely affect a substantial number of people include waste from passengers accessing the station, which could have an unpleasant odor. SCAQMD has established Rule 402 (Nuisance), which avoids nuisance odor conditions through the establishment of odor complaint tracking systems and other requirements. Typical sources of potential nuisance odors include agricultural uses, wastewater treatment facilities, food processing and chemical plants, landfills, and refineries, none of which are associated with the project. Trash receptacles at the station would be a minor source of odors and would be subject to regular servicing, maintenance, and cleaning to prevent unpleasant odors at the station. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.3.7.4.5 MAINTENANCE AND STORAGE FACILITY

3.3.7.4.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Other construction emission sources associated with the MSF that have the potential to adversely affect a substantial number of people include diesel vehicle exhaust, which has a distinctive odor. Diesel-fueled equipment used during construction would have the potential to generate odors that may be considered unpleasant. Construction at the MSF site is anticipated to occur over two separate periods of approximately one year for MSF facilities associated with Section 1 and up to five years for MSF expansion associated with Section 2. As a result, people's exposure to potential unpleasant construction-related odors near the MSF site would be temporary. See Appendix 2-C, Construction Approach Report, for construction details.

Additionally, the project measures identified under Impact AQ-3 for the reduction of DPM emissions from diesel-fueled equipment would also be effective in limiting odor impacts from diesel construction equipment exhaust. Due to the temporary nature of MSF construction and the implementation of project measures to reduce emissions from diesel-fueled equipment, construction of the MSF would not result in other emissions, such as those leading to unpleasant odors, that would adversely affect a substantial number of people. Therefore, the MSF would have a less than significant impact during construction.

3.3.7.4.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. Other MSF operational emission sources with the potential to adversely affect a substantial number of people include combustion of natural gas for comfort heating, activities associated with maintenance and upkeep of structures, and activities required for servicing, cleaning, inspection, and repairs of LRVs. Sources of potential nuisance odors are expected to be similar to those already occurring at Division 16, and operation of the existing Division 16 has not resulted in unpleasant odors affecting a substantial number of people. In addition, SCAQMD has established Rule 402 (Nuisance), which avoids nuisance odor conditions through the establishment of odor complaint tracking systems and other requirements. Therefore, the MSF would have a less than significant impact during operation.

3.3.7.5 MITIGATION MEASURES

As the impact analysis above demonstrates, construction and operation of any of the KNE alignments and stations, the design option, and the MSF would result in a less than significant impact related to air quality. Therefore, no mitigation is required under CEQA.

3.3.7.6 SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

Table 3.3-29 summarizes the air quality impact significance conclusions and applicable mitigation measures. As indicated above, there are no significant air quality impacts that would require mitigation.

TABLE 3.3-29. KNE SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

IMPACT		IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES				
		KNE SAN VICENTE–FAIRFAX ALIGNMENT	KNE FAIRFAX ALIGNMENT	KNE LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MAINTENANCE AND STORAGE FACILITY
Impact AQ-1: Air Quality Plan	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS. Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
Impact AQ-2: Regional Criteria Pollutant Emissions	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
Impact AQ-3: Exposure of Sensitive Receptors to Localized Pollutant Concentrations	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
Impact AQ-4: Other Emissions	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS

Source: Connect Los Angeles Partners 2024
LTS = less than significant

3.4 BIOLOGICAL RESOURCES

3.4.1 INTRODUCTION

This discussion provides an evaluation of K Line Northern Extension (KNE) as it relates to biological resources (e.g., plants, animals, and microorganisms). It includes descriptions of the federal, state, and local regulatory setting, existing conditions, and the impacts from construction and operation of the proposed alignments and stations, design option, and the maintenance and storage facility (MSF), as well as mitigation measures where applicable. For more detailed information, refer to the KNE Biological Resources Technical Report (Appendix 3.4-A).

3.4.2 REGULATORY FRAMEWORK

3.4.2.1 FEDERAL

The following federal laws and regulations are relevant to construction and operation of the project:

- Federal Endangered Species Act (FESA)
- Migratory Bird Treaty Act (MBTA)
- Bald and Golden Eagle Protection Act
- Clean Water Act

3.4.2.2 STATE

The following state laws and regulations are relevant to construction and operation of the project:

- California Endangered Species Act (CESA)
- California Fish and Game Code (CFGC)
- Porter-Cologne Water Quality Control Act
- California Environmental Quality Act (CEQA)

3.4.2.3 REGIONAL

No regional regulations are applicable to the project regarding biological resources.

3.4.2.4 LOCAL

The City of Los Angeles and City of West Hollywood have codes, ordinances, and general plans that regulate permitting, design, construction, and operational activities as they pertain to biological resources. The following local regulations are relevant to construction and operation of the project:

- Significant Ecological Area Program
- City of Los Angeles Native Tree Protection Ordinance
- City of West Hollywood Street Trees and Other Plants Protection Ordinance

- Los Angeles Metro Tree Policy
- Habitat Conservation Planning

3.4.3 METHODOLOGY

3.4.3.1 CEQA METHODOLOGY

The purpose of this analysis is to evaluate the project against CEQA thresholds of significance as the basis for determining the level of impacts related to biological resources. The evaluation of biological resources associated with the project was primarily based on the following activities:

- A resource study area (RSA) was established for the project in order evaluate the biological resources present and/or with potential to occur within and immediately surrounding the project, as further defined in Section 3.4.4.
- The evaluation of existing biological resources included special-status species and vegetation communities; wetlands and riparian habitat; and wildlife corridors. For the purpose of this analysis, special-status species are defined as follows:
  - Plant species designated by the California Native Plant Society (CNPS) as "rare, threatened, or endangered in California" (California Rare Plant Rank [CRPR] 1B and 2B[1] CNPS 2022)
  - Wildlife species designated as endangered, threatened, or a candidate for listing under FESA
  - Wildlife species designated as endangered, threatened, a candidate for listing, or a Species of Special Concern under CESA
  - Bat species defined by the Western Bat Working Group [WBWG] as Medium or High Priority Species
- A search of database inventories, including the California Natural Diversity Database (CNDDB 2022, 2023) and the U.S. Fish and Wildlife Service (USFWS) online Information for Planning and Consultation environmental review program (USFWS 2022b), was conducted to identify special-status plants and animals with the potential to occur in the RSA.
- A desktop review was conducted in December 2022 using web-based aerial map layers of parks and other public open spaces within the RSA. This work included using Google Earth (2022) to compare past and current biological condition as well as web-based research and the review of reports and local planning documents relevant to the RSA (such as watershed plans and city and county general plans).
- Visual surveys were conducted in May 2023 by method of a windshield survey (from a vehicle) and pedestrian survey (on foot).

[1] CRPRs are a ranking system developed by the California Native Plant Society to define and categorize rarity in California flora. The CRPRs range from presumed extinct species (CRPR 1A) to limited distribution/watchlist species (CRPR 4).

3.4.3.2 SIGNIFICANCE THRESHOLDS

In accordance with Appendix G of the 2022 CEQA Guidelines, the project would have a significant impact related to biological resources if it would:

- Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or USFWS.
- Impact BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS.
- Impact BIO-3: Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- Impact BIO-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.
- Impact BIO-5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Impact BIO-6: Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state HCP.

3.4.4 RESOURCE STUDY AREA

The RSA for the biological resources analysis is delineated as a 500-foot radius around features associated with the alignments and stations, the design option, and the MSF that have potential to result in surface-level disturbance (both permanent and temporary) (Figure 3.4-1 and Figure 3.4-2), which is considered a standard buffer size used to account for potential indirect impacts on predominantly underground Metro rail projects. The project RSA includes Los Angeles County areas of South Los Angeles, the Los Angeles International Airport area, Mid-City, Central Los Angeles, West Hollywood, and Hollywood.

FIGURE 3.4-1. RESOURCE STUDY AREA FOR THE ALIGNMENTS AND DESIGN OPTION

Source: Connect Los Angeles Partners 2024

FIGURE 3.4-2. RESOURCE STUDY AREA OF THE MAINTENANCE AND STORAGE FACILITY

Source: Connect Los Angeles Partners 2024

The RSA was defined and delineated based on the proposed physical configuration of the project's alignments and stations, the design option, and the MSF, as well as on reviews of project plans, Google Earth imagery, and an evaluation of potential construction limits. The RSA includes project features that could affect the biological resources identified and discussed below. The RSA extends 500 feet from the perimeter of each applicable feature to account for potential indirect impacts resulting from project construction activities and operations. Features defined as "subsurface" (including the underground alignments) are not anticipated to have impacts on biological resources at surface level; therefore, they were not included in the RSA nor were they evaluated.

More specifically, the RSA includes a 500-foot radius around all features specific to the alignments and stations, the design option, and MSF.

3.4.5 EXISTING SETTING

This existing setting discussion summarizes current conditions related to biological resources within and near the KNE RSA.

3.4.5.1 REGIONAL SETTING

The regional setting associated with the project vicinity includes a variety of land uses, including single-family and multifamily residential neighborhoods and dense commercial and retail corridors. The character of communities changes from the Metro E Line in the south to Hollywood in the north. The southern portion of the project vicinity (south of Wilshire Boulevard) consists of low-rise but fairly dense housing with small-scale commercial uses, while the northern portion of the project vicinity (north of Wilshire Boulevard) is characterized by regional activity centers, dense retail development, hotels, and significant employment centers and tourist attractions, as well as high-density, multifamily residential development.

3.4.5.1.1 ALIGNMENTS AND STATIONS

The landscape and general regional setting for each alignment and station is fairly uniform throughout the RSA as a result of heavy urbanization; therefore, the biological resources and existing conditions discussed in detail below are applicable to the RSA associated with all stations and other ancillary facilities associated with each alignment, unless otherwise specified.

3.4.5.1.2 HOLLYWOOD BOWL DESIGN OPTION

The existing conditions associated with the Hollywood Bowl Design Option are generally consistent with the alignments and stations. The construction footprint overlaps predominantly with existing roadways and areas of development and/or disturbance; however, there is a naturally vegetated hillslope that is less developed within the northwestern-most portion of the construction footprint that was evaluated during the field survey.

3.4.5.1.3 MAINTENANCE AND STORAGE FACILITY

The landscape and general regional setting of the MSF is fairly uniform throughout the project vicinity as a result of heavy urbanization, and specifically, commercial development.

3.4.5.1.4 SURROUNDING LAND USE

The entirety of the RSA is located in a metropolitan setting that consists of a highly urbanized landscape that includes both commercial and residential communities. The landscape within both the RSA and in the immediate vicinity is also composed of housing developments, high-density residential buildings, commercial and retail buildings, and roads and highways. Development and improvements continue to occur within the RSA and immediate vicinity relating to infrastructure improvement, new housing developments, and commercial development. In general, natural habitats within the RSA are highly fragmented and rare; however, biological resources have the potential to occur in areas of urban landscaping, open spaces, community parks, and vacant lots within the RSA.

3.4.5.1.5 TOPOGRAPHY AND SOILS

The topography of the RSA ranges between approximately 100 to 580 feet above the average height of the ocean surface, or mean sea level. Higher elevations are mainly found in the northern part of the project vicinity near the Hollywood Bowl and Hollywood Hills, while lower elevations occur in the southern and central portions of the project vicinity.

A number of different soil types are present within the RSA and serve as a reservoir for water and nutrients essential for the success of biological resources such as plants and wildlife. According to the United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Soils Report for Los Angeles County, California, Southeastern Part, 10 soil types are within the RSA (USDA NRCS 2022):

- Osito-Kawenga association, 20 to 65 percent slopes
- Urban land-Anthraltic Xerothents, loamy substratum-Grommet complex, 0 to 5 percent slopes
- Urban land-Azuvina-Montebello complex, 0 to 5 percent slopes
- Urban land-Ballona-Typic Xerorthents, fine substratum complex, 0 to 5 percent slopes
- Urban land-Biscailuz-Pico complex, 0 to 2 percent slopes
- Urban land-Grommet-Ballona, 0 to 5 percent slopes
- Urban land-Palmview-Tujunga, gravelly complex, 2 to 9 percent slopes
- Urban land-Thums-Pierview complex, 0 to 5 percent slopes
- Urban land-Xerothents, landscaped complex, 0 to 5 percent slopes
- Urban land-Windfetch-typic Haplozerolls complex, 0 to 2 percent slopes

3.4.5.1.6 CLIMATE

Average precipitation for the City of Los Angeles and the City of West Hollywood is approximately 14.75 inches per year (Los Angeles Almanac 2024). The wettest month for the two cities is February, which averages 5.07 inches, and the driest month is July, which averages zero inches. The average annual low temperature for both cities is approximately 56 degrees Fahrenheit (F) and is lowest in December through March, and the average annual high temperature is approximately 72 degrees F and is highest in August with temperatures that can reach over 100 degrees. The climate is generally categorized as Köppen Csa Mediterranean, which is characterized by hot, dry summers, and mild to warm winters, with increased precipitation (CDFW 2022).

3.4.5.1.7 VEGETATION COMMUNITIES AND COVER CLASSES

Vegetation communities found within the majority of the RSA consist largely of ornamental trees, grasses, and shrubs. A fragmented area of naturally vegetated habitat identified as disturbed buckwheat scrub is located in the northernmost portion of the RSA near the Hollywood Bowl Design Option. This area occurs adjacent to the station box/crossover and overlaps with the associated construction staging area. A description of the vegetation community cover classes identified during the desktop analysis is provided below based on *A Manual of California Vegetation, Second Edition* (Sawyer et al. 2009).

3.4.5.1.7.1 VEGETATION COMMUNITIES

This category includes vegetated areas with species generally native to California:

- Ornamental: Areas classified as ornamental landscape are generally associated with developed areas with significant landscape plantings of non-native and/or native trees, shrubs, and herbaceous species that originate from a plant nursery, as shown in Figure 3.4-3. The dominant species typically observed include oleander (*Nerium oleander*), eucalyptus trees (*Eucalyptus* sp.), and Canary Island pine (*Pinus canariensis*).

FIGURE 3.4-3. CHINESE ELMS AND TUCKEROOS ON N LA BREA AVENUE, WEST HOLLYWOOD

Source: Connect Los Angeles Partners 2024

- Disturbed buckwheat scrub: This vegetation community is dominated by species indicative of buckwheat scrub such as California buckwheat (*Eriogonum fasciculatum*), California brittlebush (*Encelia californica*), coyote bush (*Baccharis pilularis*), and laurel sumac (*Malosma laurina*), as shown in Figure 3.4-4. Numerous non-native plant species, including brome grasses (*Bromus* ssp.), are also found within this vegetation community.

FIGURE 3.4-4. NORTHWEST-FACING VIEW OF VEGETATION ALONG CAHUENGA BOULEVARD, LOS ANGELES

Source: Connect Los Angeles Partners 2024

3.4.5.1.7.2 COVER CLASSES

This category includes non-vegetated or sparsely vegetated areas with species generally not native to California:

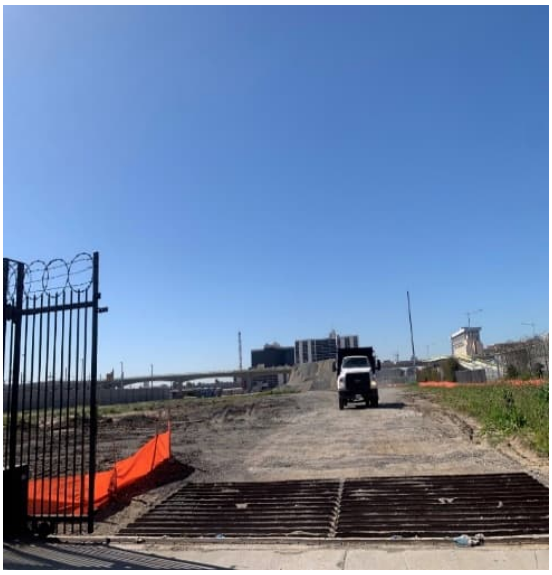
- Developed: The developed cover class consists of areas of paved roads, residential areas, industrial buildings, commercial developments, bridges, and other structures that contain no vegetation or some ornamental landscaping, as shown in Figure 3.4-5. The RSA is mainly composed of this cover class.

FIGURE 3.4-5. MEXICAN FAN PALMS ON N HIGHLAND AVENUE, HOLLYWOOD

Source: Connect Los Angeles Partners 2024

- Unvegetated: Unvegetated cover class consists of vacant lots with little to no vegetation due to human disturbance, as shown in Figure 3.4-6.

FIGURE 3.4-6. NO-ACCESS AREA WITH ALL VEGETATION CLEARED ON ARBOR VITAE STREET, LOS ANGELES



Source: Connect Los Angeles Partners 2024

3.4.5.1.8 SPECIAL-STATUS NATURAL COMMUNITIES

Special-status natural communities are those that are designated as rare in the region by CDFW, support special-status plant or wildlife species, or receive regulatory protection (i.e., Section 404 of the Clean Water Act and/or Sections 1600 et seq. of the CFGC). No special-status natural communities were found in the RSA.

3.4.5.1.9 SPECIAL-STATUS PLANT AND WILDLIFE COMMUNITIES

A total of 60 special-status species were identified from database queries and evaluated for the potential to occur; 12 of which (six special-status plant species and six special-status wildlife species) have overlapping historic occurrences within the RSA.[2] No special-status species overlap with the MSF RSA, and of the 60 special-status species identified from the database queries, all but one (the hoary bat [*Lasiurus cinereus*; WBWG Medium Priority Species]) were determined to have no potential to occur due to the lack or absence of suitable habitat within the RSA. The hoary bat has a low potential to occur in the RSA during migratory flyover events; however, it is not expected to roost (including both solitary and maternity roosts) or forage consistently within the RSA due to limited suitable resources. The only CNDDB occurrence of a hoary bat within the RSA is from 1928 (CNDDB 2022, 2023), and this area is now highly developed. The largely urbanized and developed nature of the RSA results in unfavorable conditions for foraging and breeding for these species. Common wildlife and plant species within the RSA (i.e., nonspecial-status) are likely to be tolerant of human-derived disturbances and, therefore, adapted to surviving in an urban environment.

[2] See Appendix A, Special-Status Potential to Occur Table, in Appendix 3.4-A (KNE Biological Resources Technical Report).

Although no special-status species were determined to be present or have a medium or high potential to occur, numerous avian species protected under both the MBTA (16 United States Code Section 703 et seq.) and CFGC have the potential to occur within the RSA. Portions of the RSA provide suitable breeding, foraging, and roosting habitat in the form of trees, vegetation, and man-made structures.

3.4.5.1.10 WILDLIFE CORRIDORS AND MOVEMENT

A migration or wildlife corridor is a habitat that connects two or more patches of habitat that would otherwise be isolated from each other. Wildlife corridors are typically adjacent to urban areas. A functional wildlife corridor allows for ease of movement between habitat patches and is important to prevent habitat fragmentation typically associated with human development, which can lead to a decrease in biodiversity and ecosystem functionality.

The landscape within the RSA consists of commercial, residential, industrial, and governmental properties. According to the CDFW Biogeographic Information and Observation System, no formally designated Essential Connectivity Areas are located within the RSA; however, there is a Natural Landscape Block, designated as such due to the presence of protected natural lands. This Natural Landscape Block is northeast of the RSA, within Griffith Park, and extends southwest, crossing the Hollywood Freeway and into the Hollywood Bowl Design Option. It provides connectivity between natural landscapes associated with the Hollywood Reservoir and Runyon Canyon Park located in the Hollywood Hills. While most of the RSA is within a developed area, the Natural Landscape Block that overlaps with the Hollywood Bowl Station has potential to be used by wildlife during migration and dispersal events; however, the existing Hollywood Freeway, additional surface streets, and scattered residential neighborhoods likely already act as restrictive barriers and a general deterrent to wildlife movement.

3.4.5.1.11 JURISDICTIONAL RESOURCES

Based on USFWS National Wetland Inventory Web Mapper (USFWS 2022a) and Google Earth imagery, no jurisdictional resources occur within the RSA; however, three jurisdictional resources are located in the surrounding area: the Los Angeles River, the Hollywood Reservoir, and the Ballona Creek Ecological Reserve. None of these jurisdictional resources occur within an RSA, and they would not be affected by the project.

3.4.6 PROJECT MEASURES

Project measures are design features, best management practices (BMPs), or other commitments that Metro would implement as part of all proposed alignments and stations, the design option, and the MSF to reduce or avoid environmental effects associated with project construction and operation. Project measures are not the same as mitigation measures, which are used to reduce an environmental impact's significance level. Where applicable, project measures are also discussed in Section 3.4.7 as part of the evaluation of environmental impacts.

3.4.6.1 PM BIO-1: CONSTRUCTION AND OPERATIONAL BEST MANAGEMENT PRACTICES

To ensure biological resources are generally protected during construction and operation of the project, the following BMPs are recommended as project measures:

1. Project limits shall be clearly delineated with fencing or other boundary markers prior to the start of project construction or operational activities, as applicable. Workers shall strictly limit their activities, vehicles, equipment, and materials to the designated project limits and staging areas. The boundaries of the access roads will be clearly delineated so that activities do not extend beyond the authorized limits of road repairs.
2. During project construction and operation, the project limits shall be kept as clean of debris as possible to avoid attracting wildlife. All food-related trash items shall be enclosed in sealed containers and removed daily from the work zone.
3. Smoking will be prohibited in all areas except for clearly defined disturbed/developed areas where the potential to start a fire is minimal.
4. No pets, outside of approved service animals, will be permitted within the area of construction or operational activities.
5. During project construction and operation, a minimal amount of watering will be used for dust control. Water trucks will ensure that water is not running off roads and other surfaces into the environment.
6. Fueling of vehicles and equipment will be conducted only in authorized locations such as staging/laydown areas and will use secondary containment to prevent releases of fuel into the environment that could contaminate and/or degrade biological resources.
7. Spill kits will be kept readily available in project vehicles/equipment.

3.4.7 IMPACT EVALUATION AND MITIGATION MEASURES

This analysis presents the construction and operational impacts for biological resources, as well as any applicable mitigation measures associated with KNE. A summary of the impact conclusions and applicable mitigation measures is found in Table 3.4-1 in Section 3.4.7.8.

3.4.7.1 IMPACT BIO-1: IMPACT ON CANDIDATE, SENSITIVE, OR SPECIAL-STATUS SPECIES

Impact BIO-1: Would the implementation of the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

3.4.7.1.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.4.7.1.1.1 CONSTRUCTION IMPACTS

Significant Impact. Based on habitat requirements and a desktop analysis, migratory nesting birds protected under the MBTA (hereafter referred to as “migratory nesting birds”) have the potential to

occur in the KNE San Vicente–Fairfax Alignment RSA. Construction activities (such as permanent vegetation removal resulting in a loss of breeding and/or foraging habitat and prolonged heavy equipment operation resulting in noise, dust, and vibration disturbances) associated with the alignment could therefore have an adverse effect, either directly or through habitat modifications on migratory nesting birds. Project measure PM BIO-1 would include construction BMPs, such as clearly delineating the project limits, to avoid or reduce the level of impacts. However, even with implementation of these BMPs, the potential exists for a substantial adverse effect on migratory nesting birds. Therefore, the KNE San Vicente–Fairfax Alignment would have a significant impact during construction, and mitigation would be required.

3.4.7.1.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. There would be little to no tree and vegetation removal expected during operational activities. As a result, there would be no effect on migratory nesting birds. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.4.7.1.2 KNE FAIRFAX ALIGNMENT

3.4.7.1.2.1 CONSTRUCTION IMPACTS

Significant Impact. Based on habitat requirements and a desktop analysis, migratory nesting birds have the potential to occur in the KNE Fairfax Alignment RSA. Construction activities (such as permanent vegetation removal resulting in a loss of breeding and/or foraging habitat and prolonged heavy equipment operation resulting in noise, dust, and vibration disturbances) associated with the alignment could therefore have an adverse effect, either directly or through habitat modifications on migratory nesting birds. Project measure PM BIO-1 would include construction BMPs, such as clearly delineating the project limits, to avoid or reduce the level of impacts. However, even with implementation of these BMPs, the potential exists for a substantial adverse effect on migratory nesting birds. Therefore, the KNE Fairfax Alignment would have a significant impact during construction, and mitigation would be required.

3.4.7.1.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. There would be little to no tree and vegetation removal expected during operational activities. As a result, there would be no effect on migratory nesting birds. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.4.7.1.3 KNE LA BREA ALIGNMENT

3.4.7.1.3.1 CONSTRUCTION IMPACTS

Significant Impact. Based on habitat requirements and a desktop analysis, migratory nesting birds have the potential to occur in the KNE La Brea Alignment RSA. Construction activities (such as permanent vegetation removal resulting in a loss of breeding and/or foraging habitat and prolonged heavy equipment operation resulting in noise, dust, and vibration disturbances) associated with the alignment could therefore have an adverse effect, either directly or through habitat modifications on migratory

nesting birds. Project measure PM BIO-1 would include construction BMPs, such as clearly delineating the project limits, to avoid or reduce the level of impacts. However, even with implementation of these BMPs, the potential exists for a substantial adverse effect on migratory nesting birds. Therefore, the KNE La Brea Alignment would have a significant impact during construction, and mitigation would be required.

3.4.7.1.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. There would be little to no tree and vegetation removal expected during operational activities. As a result, there would be no effect on migratory nesting birds. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.4.7.1.4 HOLLYWOOD BOWL DESIGN OPTION

3.4.7.1.4.1 CONSTRUCTION IMPACTS

Significant Impact. Based on habitat requirements and a desktop analysis, migratory nesting birds have the potential to occur in the Hollywood Bowl Design Option RSA. Construction activities (such as permanent vegetation removal resulting in a loss of breeding and/or foraging habitat and prolonged heavy equipment operation resulting in noise, dust, and vibration disturbances) associated with the design option could therefore have an adverse effect, either directly or through habitat modifications on migratory nesting birds. Project measure PM BIO-1 would include construction BMPs, such as clearly delineating the project limits, to avoid or reduce the level of impacts. However, even with implementation of these BMPs, the potential exists for a substantial adverse effect on migratory nesting birds. Therefore, the Hollywood Bowl Design Option would have a significant impact during construction, and mitigation would be required.

3.4.7.1.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. There would be little to no tree and vegetation removal expected during operational activities. As a result, there would be no effect on migratory nesting birds. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.4.7.1.5 MAINTENANCE AND STORAGE FACILITY

3.4.7.1.5.1 CONSTRUCTION IMPACTS

Significant Impact. Based on habitat requirements and a desktop analysis, migratory nesting birds have the potential to occur in the MSF RSA. Construction activities (such as permanent vegetation removal resulting in a loss of breeding and/or foraging habitat and prolonged heavy equipment operation resulting in noise, dust, and vibration disturbances) associated with the MSF could therefore have an adverse effect, either directly or through habitat modifications on migratory nesting birds. Project measure PM BIO-1 would include construction BMPs, such as clearly delineating the project limits, to avoid or reduce the level of impacts. However, even with implementation of these BMPs, the potential exists for a substantial adverse effect on migratory nesting birds. Therefore, the MSF would have a significant impact during construction, and mitigation would be required.

3.4.7.1.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. There would be little to no tree and vegetation removal expected during operational activities. As a result, there would be no effect on migratory nesting birds. Therefore, the MSF would have a less than significant impact during operation.

3.4.7.2 IMPACT BIO-2: IMPACT ON RIPARIAN OR OTHER SENSITIVE NATURAL COMMUNITY

Impact BIO-2: Would the implementation of the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFW or USFWS?

3.4.7.2.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.4.7.2.1.1 CONSTRUCTION IMPACTS

No Impact. No riparian or sensitive natural communities occur within the RSA. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during construction.

3.4.7.2.1.2 OPERATIONAL IMPACTS

No Impact. No riparian or sensitive natural communities occur within the RSA. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during operation.

3.4.7.2.2 KNE FAIRFAX ALIGNMENT

3.4.7.2.2.1 CONSTRUCTION IMPACTS

No Impact. No riparian or sensitive natural communities occur within the RSA. Therefore, the KNE Fairfax Alignment would have no impact during construction.

3.4.7.2.2.2 OPERATIONAL IMPACTS

No Impact. No riparian or sensitive natural communities occur within the RSA. Therefore, the KNE Fairfax Alignment would have no impact during operation.

3.4.7.2.3 KNE LA BREA ALIGNMENT

3.4.7.2.3.1 CONSTRUCTION IMPACTS

No Impact. No riparian or sensitive natural communities occur within the RSA. Therefore, the KNE La Brea Alignment would have no impact during construction.

3.4.7.2.3.2 OPERATIONAL IMPACTS

No Impact. No riparian or sensitive natural communities occur within the RSA. Therefore, the KNE La Brea Alignment would have no impact during operation.

3.4.7.2.4 HOLLYWOOD BOWL DESIGN OPTION

3.4.7.2.4.1 CONSTRUCTION IMPACTS

No Impact. No riparian or sensitive natural communities occur within the RSA. Therefore, the Hollywood Bowl Design Option would have no impact during construction.

3.4.7.2.4.2 OPERATIONAL IMPACTS

No Impact. No riparian or sensitive natural communities occur within the RSA. Therefore, the Hollywood Bowl Design Option would have no impact during operation.

3.4.7.2.5 MAINTENANCE AND STORAGE FACILITY

3.4.7.2.5.1 CONSTRUCTION IMPACTS

No Impact. No riparian or sensitive natural communities occur within the RSA. Therefore, the MSF would have no impact during construction.

3.4.7.2.5.2 OPERATIONAL IMPACTS

No Impact. No riparian or sensitive natural communities occur within the RSA. Therefore, the MSF would have no impact during operation.

3.4.7.3 IMPACT BIO-3: IMPACT ON WETLANDS

Impact BIO-3: Would the implementation of the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

3.4.7.3.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.4.7.3.1.1 CONSTRUCTION IMPACTS

No Impact. No state or federally protected wetlands occur within the RSA. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during construction.

3.4.7.3.1.2 OPERATIONAL IMPACTS

No Impact. No state or federally protected wetlands occur within the RSA. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during operation.

3.4.7.3.2 KNE FAIRFAX ALIGNMENT

3.4.7.3.2.1 CONSTRUCTION IMPACTS

No Impact. No state or federally protected wetlands occur within the RSA. Therefore, the KNE Fairfax Alignment would have no impact during construction.

3.4.7.3.2.2 OPERATIONAL IMPACTS

No Impact. No state or federally protected wetlands occur within the RSA. Therefore, the KNE Fairfax Alignment would have no impact during operation.

3.4.7.3.3 KNE LA BREA ALIGNMENT

3.4.7.3.3.1 CONSTRUCTION IMPACTS

No Impact. No state or federally protected wetlands occur within the RSA. Therefore, the KNE La Brea Alignment would have no impact during construction.

3.4.7.3.3.2 OPERATIONAL IMPACTS

No Impact. No state or federally protected wetlands occur within the RSA. Therefore, the KNE La Brea Alignment would have no impact during operation.

3.4.7.3.4 HOLLYWOOD BOWL DESIGN OPTION

3.4.7.3.4.1 CONSTRUCTION IMPACTS

No Impact. No state or federally protected wetlands occur within the RSA. Therefore, the Hollywood Bowl Design Option would have no impact during construction.

3.4.7.3.4.2 OPERATIONAL IMPACTS

No Impact. No state or federally protected wetlands occur within the RSA. Therefore, the Hollywood Bowl Design Option would have no impact during operation.

3.4.7.3.5 MAINTENANCE AND STORAGE FACILITY

3.4.7.3.5.1 CONSTRUCTION IMPACTS

No Impact. No state or federally protected wetlands occur within the RSA. Therefore, the MSF would have no impact during construction.

3.4.7.3.5.2 OPERATIONAL IMPACTS

No Impact. No state or federally protected wetlands occur within the RSA. Therefore, the MSF would have no impact during operation.

3.4.7.4 IMPACT BIO-4: INTERFERE WITH MOVEMENT OF NATIVE RESIDENT OR MIGRATORY FISH OR WILDLIFE SPECIES

Impact BIO-4: Would the implementation of the project interfere substantially with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

3.4.7.4.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.4.7.4.1.1 CONSTRUCTION IMPACTS

Significant Impact. No native resident or migratory fish with established native resident corridors or migration routes are present within the KNE San Vicente–Fairfax Alignment RSA. Migratory nesting birds could occur within the RSA. Construction activities (such as vegetation removal resulting in a loss of foraging, resting, or sheltering habitat used during migration events) associated with the alignment could therefore interfere with the movement of native resident or migratory wildlife species. Project measure PM BIO-1 would include construction BMPs, such as clearly delineating the project limits, to avoid or reduce the level of impacts. However, even with implementation of these BMPs, the potential exists for the project to substantially affect migratory bird species, which would be considered a significant impact. Therefore, the KNE San Vicente–Fairfax Alignment would have a significant impact during construction, and mitigation would be required.

3.4.7.4.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. No native resident or migratory fish with established native resident corridors or migration routes are present within the KNE San Vicente–Fairfax Alignment RSA. There would be little to no tree and vegetation removal expected during operational activities. As a result, there would be no effect on migratory birds. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.4.7.4.2 KNE FAIRFAX ALIGNMENT

3.4.7.4.2.1 CONSTRUCTION IMPACTS

Significant Impact. No native resident or migratory fish with established native resident corridors or migration routes are present within the KNE Fairfax Alignment RSA. Migratory nesting birds could occur within the RSA. Construction activities (such as vegetation removal resulting in a loss of foraging, resting, or sheltering habitat used during migration events) associated with the alignment could therefore interfere with the movement of native resident or migratory wildlife species. Project measure PM BIO-1 would include construction BMPs, such as clearly delineating the project limits, to avoid or reduce the level of impacts. However, even with implementation of these BMPs, the potential exists for the project to substantially affect migratory bird species, which would be considered a significant impact. Therefore, the KNE Fairfax Alignment would have a significant impact during construction, and mitigation would be required.

3.4.7.4.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. No native resident or migratory fish with established native resident corridors or migration routes are present within the KNE Fairfax Alignment RSA. There would be little to no tree and vegetation removal expected during operational activities. As a result, there would be no effect on migratory birds. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.4.7.4.3 KNE LA BREA ALIGNMENT

3.4.7.4.3.1 CONSTRUCTION IMPACTS

Significant Impact. No native resident or migratory fish with established native resident corridors or migration routes are present within the KNE La Brea Alignment RSA. Migratory nesting birds could occur within the RSA. Construction activities (such as vegetation removal resulting in a loss of foraging, resting, or sheltering habitat used during migration events) associated with the alignment could therefore interfere with the movement of native resident or migratory wildlife species. Project measure PM BIO-1 would include construction BMPs, such as clearly delineating the project limits, to avoid or reduce the level of impacts. However, even with implementation of these BMPs, the potential exists for the project to substantially affect migratory bird species, which would be considered a significant impact. Therefore, the KNE La Brea Alignment would have a significant impact during construction, and mitigation would be required.

3.4.7.4.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. No native resident or migratory fish with established native resident corridors or migration routes are present within the KNE La Brea Alignment RSA. There would be little to no tree and vegetation removal expected during operational activities. As a result, there would be no effect on migratory birds. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.4.7.4.4 HOLLYWOOD BOWL DESIGN OPTION

3.4.7.4.4.1 CONSTRUCTION IMPACTS

Significant Impact. No native resident or migratory fish with established native resident corridors or migration routes are present within the Hollywood Bowl Design Option RSA. There is a CDFW-designated Natural Landscape Block within the RSA. While vegetation removal during construction could have an impact on the Natural Landscape Block, it is not anticipated to affect its overall function. Migratory nesting birds could occur within the RSA, and construction activities (such as vegetation removal resulting in a loss of foraging, resting, or sheltering habitat used during migration events) associated with the design option could therefore interfere with the movement of native resident or migratory wildlife species. Project measure PM BIO-1 would include construction BMPs, such as clearly delineating the project limits, to avoid or reduce the level of impacts. However, even with implementation of these BMPs, the potential exists for the project to substantially affect migratory bird species, which would be

considered a significant impact. Therefore, the Hollywood Bowl Design Option would have a significant impact during construction, and mitigation would be required.

3.4.7.4.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. No native resident or migratory fish with established native resident corridors or migration routes are present within the Hollywood Bowl Design Option RSA. There would be little to no tree and vegetation removal expected during operational activities. As a result, there would be no effect on migratory birds. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.4.7.4.5 MAINTENANCE AND STORAGE FACILITY

3.4.7.4.5.1 CONSTRUCTION IMPACTS

Significant Impact. No native resident or migratory fish with established native resident corridors or migration routes are present within the MSF RSA. Migratory nesting birds could occur within the RSA. Construction activities (such as vegetation removal resulting in a loss of foraging, resting, or sheltering habitat used during migration events) associated with the MSF could therefore interfere with the movement of native resident or migratory wildlife species. Project measure PM BIO-1 would include construction BMPs, such as clearly delineating the project limits, to avoid or reduce the level of impacts. However, even with implementation of these BMPs, the potential exists for the project to substantially affect migratory bird species, which would be considered a significant impact. Therefore, the MSF would have a significant impact during construction, and mitigation would be required.

3.4.7.4.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. No native resident or migratory fish with established native resident corridors or migration routes are present within the MSF RSA. There would be little to no tree and vegetation removal expected during operational activities. As a result, there would be no effect on migratory birds. Therefore, the MSF would have a less than significant impact during operation.

3.4.7.5 IMPACT BIO-5: CONFLICT WITH LOCAL POLICIES OR ORDINANCES PROTECTING BIOLOGICAL RESOURCES

Impact BIO-5: Would the implementation of the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

3.4.7.5.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.4.7.5.1.1 CONSTRUCTION IMPACTS

Significant Impact. Tree and vegetation removal may occur within the City of Los Angeles and the City of West Hollywood. Each city's tree protection ordinance would require coordination, a tree inventory survey, and permits related to potential impacts to native and/or ornamental trees along city streets.

Therefore, the KNE San Vicente–Fairfax Alignment would have a significant impact during construction, and mitigation would be required.

3.4.7.5.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. There would be little to no tree and vegetation removal expected during operational activities. As a result, there would be no conflict with local policies or ordinances. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.4.7.5.2 KNE FAIRFAX ALIGNMENT

3.4.7.5.2.1 CONSTRUCTION IMPACTS

Significant Impact. Tree and vegetation removal may occur within the City of Los Angeles and the City of West Hollywood. Each city's tree protection ordinance would require coordination, a tree inventory survey, and permits related to potential impacts to native and/or ornamental trees along city streets. Therefore, the KNE Fairfax Alignment would have a significant impact during construction, and mitigation would be required.

3.4.7.5.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. There would be little to no tree and vegetation removal expected during operational activities. As a result, there would be no conflict with local policies or ordinances. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.4.7.5.3 KNE LA BREA ALIGNMENT

3.4.7.5.3.1 CONSTRUCTION IMPACTS

Significant Impact. Tree and vegetation removal may occur within the City of Los Angeles and the City of West Hollywood. Each city's tree protection ordinance would require coordination, a tree inventory survey, and permits related to potential impacts to native and/or ornamental trees along city streets. Therefore, the KNE La Brea Alignment would have a significant impact during construction, and mitigation would be required.

3.4.7.5.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. There would be little to no tree and vegetation removal expected during operational activities. As a result, there would be no conflict with local policies or ordinances. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.4.7.5.4 HOLLYWOOD BOWL DESIGN OPTION

3.4.7.5.4.1 CONSTRUCTION IMPACTS

Significant Impact. Tree and vegetation removal may occur within the City of Los Angeles. The city's tree protection ordinance would require coordination, a tree inventory survey, and permits related to potential impacts to native and/or ornamental trees along city streets. Therefore, the Hollywood Bowl Design Option would have a significant impact during construction, and mitigation would be required.

3.4.7.5.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. There would be little to no tree and vegetation removal expected during operational activities. As a result, there would be no conflict with local policies or ordinances. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.4.7.5.5 MAINTENANCE AND STORAGE FACILITY

3.4.7.5.5.1 CONSTRUCTION IMPACTS

Significant Impact. Tree and vegetation removal may occur within the City of Los Angeles. The city's tree protection ordinance would require coordination, a tree inventory survey, and permits related to potential impacts to native and/or ornamental trees along city streets. Therefore, the MSF would have a significant impact during construction, and mitigation would be required.

3.4.7.5.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. There would be little to no tree and vegetation removal expected during operational activities. As a result, there would be no conflict with local policies or ordinances. Therefore, the MSF would have a less than significant impact during operation.

3.4.7.6 IMPACT BIO-6: CONFLICT WITH PROVISIONS OF A HABITAT CONSERVATION PLAN OR NATURAL COMMUNITY CONSERVATION PLAN

Impact BIO-6: Would the implementation of the project conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state HCP?

3.4.7.6.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.4.7.6.1.1 CONSTRUCTION IMPACTS

No Impact. There are no adopted HCP, NCCP, or other approved HCPs that occur within the RSA. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during construction.

3.4.7.6.1.2 OPERATIONAL IMPACTS

No Impact. There are no adopted HCP, NCCP, or other approved HCPs that occur within the RSA. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during operation.

3.4.7.6.2 KNE FAIRFAX ALIGNMENT

3.4.7.6.2.1 CONSTRUCTION IMPACTS

No Impact. There are no adopted HCP, NCCP, or other approved HCPs that occur within the RSA. Therefore, the KNE Fairfax Alignment would have no impact during construction.

3.4.7.6.2.2 OPERATIONAL IMPACTS

No Impact. There are no adopted HCP, NCCP, or other approved HCPs that occur within the RSA. Therefore, the KNE Fairfax Alignment would have no impact during operation.

3.4.7.6.3 KNE LA BREA ALIGNMENT

3.4.7.6.3.1 CONSTRUCTION IMPACTS

No Impact. There are no adopted HCP, NCCP, or other approved HCPs that occur within the RSA. Therefore, the KNE La Brea Alignment would have no impact during construction.

3.4.7.6.3.2 OPERATIONAL IMPACTS

No Impact. There are no adopted HCP, NCCP, or other approved HCPs that occur within the RSA. Therefore, the KNE La Brea Alignment would have no impact during operation.

3.4.7.6.4 HOLLYWOOD BOWL DESIGN OPTION

3.4.7.6.4.1 CONSTRUCTION IMPACTS

No Impact. There are no adopted HCP, NCCP, or other approved HCPs that occur within the RSA. Therefore, the Hollywood Bowl Design Option would have no impact during construction.

3.4.7.6.4.2 OPERATIONAL IMPACTS

No Impact. There are no adopted HCP, NCCP, or other approved HCPs that occur within the RSA. Therefore, the Hollywood Bowl Design Option would have no impact during operation.

3.4.7.6.5 MAINTENANCE AND STORAGE FACILITY

3.4.7.6.5.1 CONSTRUCTION IMPACTS

No Impact. There are no adopted HCP, NCCP, or other approved HCPs that occur within the RSA. Therefore, the MSF would have no impact during construction.

3.4.7.6.5.2 OPERATIONAL IMPACTS

No Impact. There are no adopted HCP, NCCP, or other approved HCPs that occur within the RSA. Therefore, the MSF would have no impact during operation.

3.4.7.7 MITIGATION MEASURES

The mitigation measures described below are provided to reduce significant biological resources impacts. Section 3.4.7.7.3 discusses the impact significance after mitigation.

3.4.7.7.1 MM BIO-1: AVOID AND MINIMIZE PROJECT-RELATED IMPACTS TO MIGRATORY NESTING BIRDS

The clearance of any vegetation shall occur outside of the nesting bird season (nesting bird season is generally defined as January 1 through September 30). If vegetation removal outside this time period is not feasible, the following additional measures shall be employed to avoid and minimize impacts to special-status bird species and migratory nesting birds protected under the MBTA and CFGC:

- A nesting bird survey shall be conducted by a Qualified Biologist no more than seven days, and preferably within 72 hours, prior to start of construction or operational activities that will remove or disturb suitable nesting habitat (including vegetation and structures). All observations of avian breeding behavior and nests found shall be recorded. If project activities are delayed past the 72 hours, then another nesting bird survey should be completed within 24 hours.
- If project activities must occur within a nest avoidance zone, then a buffer shall be established around each active nest. A 200-foot-radius buffer for nesting birds and a 500-foot-radius buffer for raptor nests shall be implemented. The Qualified Biologist may adjust the buffer distance based on construction activities occurring within the vicinity of the bird nest and the bird's tolerance to the construction activities. A Qualified Biologist shall monitor each nest on a biweekly basis, and project activities shall be postponed until the Qualified Biologist determines that the nest is no longer active (either by fledgling or failing naturally). If a bird nests while active construction is in progress, it is assumed that the bird is tolerant of that level of disturbance and project activities shall not be postponed unless the individual is later observed to be in a distressed state by the Qualified Biologist during the biweekly checks.
- If the recommended nest avoidance buffer is not feasible, a buffer reduction is possible, taking into consideration the location of work and type of activity, distance of nest from work area, surrounding vegetation and line-of-sight between the nest and work areas, tolerance of species to disturbance, and observations of the nesting bird's reaction to project activities. If a Qualified Biologist determines nesting activities may fail as a result of work activities, all project work would cease within the recommended no-disturbance buffer (defined as a 200-foot radius for nesting birds and 500-foot radius for raptors) until a Qualified Biologist determines the adults and young are no longer reliant on the nest site.
- Buffers shall be delineated on-site by the Qualified Biologist for easy identification by project staff. Project staff shall be informed by the Qualified Biologist of any active nests to ensure project activities do not cause disturbance. Project staff shall be updated weekly of nest status and when avoidance buffers are no longer necessary.
- If night-time lighting is determined to be necessary, it shall be shielded and directed away from adjacent native habitats.
- A summary of nesting bird surveys, monitoring efforts, and any no-disturbance buffers that were installed shall be documented by the Qualified Biologist at the conclusion of each nesting season.

3.4.7.7.2 MM BIO-2: AVOID AND MINIMIZE PROJECT-RELATED IMPACTS TO PROTECTED TREES

To avoid any impacts on protected trees resulting from project activities, the following shall be implemented:

- Prior to beginning work, a Consulting Arborist shall conduct a tree survey to identify protected trees that fall within the project's impact zones. Protected trees must be four inches or greater in diameter at 4.5 feet above ground (i.e., diameter at breast height) to be considered protected in the City of Los Angeles and City of West Hollywood.
- A Consulting Arborist shall determine if there are trees present that require additional protection in accordance with state, federal, and local laws and ordinances.
- A permit with the City of Los Angeles and/or the City of West Hollywood is required if a native or protected tree or shrub is within the city boundaries and would be affected by construction or operational activities of the project.
- Prior to construction and in accordance with the Metro Tree Policy, a tree protection plan shall be prepared identifying Tree Protection Zones for all trees designated for retention. A Tree Protection Zone shall be established by erecting temporary fences in an environmentally sensitive manner to protect trees that are determined to require preservation. Fence installation in an "environmentally sensitive manner" includes avoiding encroachment on the surrounding habitat and vegetation during construction of the fence. Fences are to remain until all site work has been completed so that large trees and other significant site features would be protected from immediate damage that could occur during construction and from delayed damage associated with construction-related activities such as loss of root area due to compaction of the soil by heavy machinery. No construction-related materials shall be stored or staged within the fenced Tree Protection Zones.
- In accordance with the Metro Tree Policy, a mitigation plan shall be prepared for any damaged or removed trees in consultation with a certified arborist. Street trees removed by Metro shall be replaced at a minimum 2:1 ratio, at or near the location of removal.

3.4.7.7.3 IMPACT SIGNIFICANCE AFTER MITIGATION

As described in Sections 3.4.7.1, 3.4.7.4, and 3.4.7.5, there would be significant impacts related to effects on candidate, sensitive, or special-status species (Impact BIO-1), interference with the movement of native resident or migratory fish or wildlife species (Impact BIO-4), and conflicts with local policies or ordinances protecting biological resources (Impact BIO-5). The following subsections describe the impact significance after implementation of mitigation.

IMPACT BIO-1: IMPACT ON CANDIDATE, SENSITIVE, OR SPECIAL-STATUS SPECIES

Implementation of mitigation measure MM BIO-1 (Avoid and Minimize Project-Related Impacts to Migratory Nesting Birds) during construction of the alignments, design option, and MSF would reduce impacts on any species identified as a candidate, sensitive, or special-status species to a less than significant level.

IMPACT BIO-4: INTERFERE WITH MOVEMENT OF NATIVE RESIDENT OR MIGRATORY FISH OR WILDLIFE SPECIES

Implementation of mitigation measure MM BIO-1 (Avoid and Minimize Project-Related Impacts to Migratory Nesting Birds) during construction of the alignments, design option, and MSF would reduce impacts on the movement of native resident or migratory fish or wildlife species to a less than significant level.

IMPACT BIO-5: CONFLICT WITH LOCAL POLICIES OR ORDINANCES PROTECTING BIOLOGICAL RESOURCES

Implementation of mitigation measure MM BIO-2 (Avoid and Minimize Project-Related Impacts to Protected Trees) during construction of the alignments, design option, and MSF would reduce conflicts with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, to a less than significant level.

3.4.7.8 SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

Table 3.4-1 summarizes the biological resources impact significance conclusions and applicable mitigation measures.

TABLE 3.4-1. KNE SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

IMPACT		IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES				
		KNE SAN VICENTE-FAIRFAX ALIGNMENT	KNE FAIRFAX ALIGNMENT	KNE LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MAINTENANCE AND STORAGE FACILITY
Impact BIO-1: Impacts to Special-Status Species	Impact Before Mitigation	Construction: Significant Operation: LTS	Construction: Significant Operation: LTS	Construction: Significant Operation: LTS	Construction: Significant Operation: LTS	Construction: Significant Operation: LTS
	Mitigation Measures	Construction: MM BIO-1 Operation: None Required	Construction: MM BIO-1 Operation: None Required	Construction: MM BIO-1 Operation: None Required	Construction: MM BIO-1 Operation: None Required	Construction: MM BIO-1 Operation: None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS. Operation: LTS	Construction: LTS. Operation: LTS
Impact BIO-2: Impacts on Riparian Habitat or Sensitive Natural Communities	Impact Before Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact
Impact BIO-3: Impacts on Protected Wetlands	Impact Before Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact

IMPACT		IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES				
		KNE SAN VICENTE-FAIRFAX ALIGNMENT	KNE FAIRFAX ALIGNMENT	KNE LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MAINTENANCE AND STORAGE FACILITY
Impact BIO-4: Impacts on Wildlife Movement	Impact Before Mitigation	Construction: Significant Operation: LTS	Construction: Significant Operation: LTS	Construction: Significant Operation: LTS	Construction: Significant Operation: LTS	Construction: Significant Operation: LTS
	Mitigation Measures	Construction: MM BIO-1 Operation: None Required	Construction: MM BIO-1 Operation: None Required	Construction: MM BIO-1 Operation: None Required	Construction: MM BIO-1 Operation: None Required	Construction: MM BIO-1 Operation: None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
Impact BIO-5: Conflict with Local Policies or Ordinances	Impact Before Mitigation	Construction: Significant Operation: LTS	Construction: Significant Operation: LTS	Construction: Significant Operation: LTS	Construction: Significant Operation: LTS	Construction: Significant Operation: LTS
	Mitigation Measures	Construction: MM BIO-2 Operation: None Required	Construction: MM BIO-2 Operation: None Required	Construction: MM BIO-2 Operation: None Required	Construction: MM BIO-2 Operation: None Required	Construction: MM BIO-2 Operation: None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
Impact BIO-6: Conflict with HCP, NCCP, or Other HCPs	Impact Before Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact

Source: Connect Los Angeles Partners 2024
LTS = less than significant impact

3.5 COMMUNITIES, POPULATION, AND HOUSING

3.5.1 INTRODUCTION

This discussion provides an evaluation of K Line Northern Extension (KNE) as it relates to communities, population, and housing. It includes descriptions of the federal, state, and local regulatory setting, existing conditions, and the impacts from construction and operation of the proposed alignments and stations, design option, and maintenance and storage facility (MSF), as well as mitigation measures where applicable. For more detailed information, refer to the KNE Communities, Population, and Housing Technical Report (Appendix 3.5-A).

3.5.2 REGULATORY FRAMEWORK

3.5.2.1 FEDERAL

The following federal laws and regulations related to relocation assistance and counseling are relevant to construction and operation of the project:

- Title VI of the Civil Rights Act of 1964 (42 United States Code [USC] 2000d et seq.)
- Title VIII of the Civil Rights Act of 1968 (42 USC 3601 et seq.)
- Executive Order 11063 (27 Federal Register 11527, November 24, 1962)

3.5.2.2 STATE

The following state laws and regulations are relevant to construction and operation of the project:

- California Relocation Act
- Uniform Act, 49 Code of Federal Regulations Part 24; California Government Code 7260 et seq.; California Code of Regulations (CCR) 600 et seq.
- CCR Title 25, Division 1, Chapter 6

3.5.2.3 REGIONAL

The following regional policies are relevant to the project:

- 2020 Southern California Association of Government's (SCAG) Connect SoCal
- 2021 SCAG 6th Cycle Final Regional Housing Needs Assessment (RHNA)

3.5.2.4 LOCAL

All Los Angeles County Metropolitan Transportation Authority (Metro) rail projects must be designed in accordance with the most recent Metro Rail Design Criteria, Section 5 of which applies to communities, population, and housing:

- Transit Oriented Communities Policy
- Equity Platform
- Joint Development Policy

The City of Los Angeles and City of West Hollywood have codes, ordinances, and general plans that regulate long-range growth and future development, land use and resource allocation, and housing treatments as they pertain to communities, population, and housing. These policies generally pertain to climate resiliency, community priorities, equity, population change, public health and safety, and economic development.

3.5.3 METHODOLOGY

3.5.3.1 CEQA METHODOLOGY

The purpose of this analysis is to evaluate the project against California Environmental Quality Act (CEQA) thresholds of significance as the basis for determining the level of impacts related to communities, population, and housing.

3.5.3.2 SIGNIFICANCE THRESHOLDS

In accordance with Appendix G of the 2022 CEQA Guidelines, the project would have a significant impact related to communities, population, and housing if it would:

- Impact CMN-1: Induce substantial unplanned population growth in an area, either directly (for example, by proposing new housing and businesses) or indirectly (for example, through extension of roads or other infrastructure).
- Impact CMN-2: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

3.5.4 RESOURCE STUDY AREA

The resource study area (RSA) for the communities, population, and housing analysis is delineated as a 0.5-mile area around each station, a 0.5-mile area around the Hollywood Bowl Design Option, and a 0.5-mile area around the MSF.

3.5.5 EXISTING SETTING

This existing setting discussion summarizes current conditions related to communities, population, and housing within and near the KNE RSA.

3.5.5.1 REGIONAL SETTING

The SCAG region encompasses six counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura) and 191 cities in an area covering more than 38,000 square miles. The SCAG 6-County Area is used to understand regional growth rates for comparison, while the Cities of Los Angeles and West Hollywood are used for actual growth rates around the project elements. Per the SCAG 2020 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (SCAG 2020a), Los Angeles County's population in 2016 was estimated at 10,110,000 persons and is anticipated to increase 16 percent by 2045. By 2045, the cities in which the regional setting is located are anticipated to grow between 16 to 21

percent in population, as shown in Table 3.5-1. The number of households is anticipated to grow between 16 to 31 percent in the regional setting and by 24 percent in Los Angeles County, as shown in Table 3.5-2. Employment growth is expected to be between 16 and 76 percent in the regional setting and 14 percent in Los Angeles County, as shown in Table 3.5-3. Thus, the jurisdictions in the regional setting have varied rates of population, household, and employment growth, and there are areas with growth rates that are both greater and less than the Los Angeles County average. Because population and housing trends occur at the regional level, the regional setting is the appropriate scale for this type of analysis.

TABLE 3.5-1. POPULATION GROWTH (2016-2045)

AREA	2016	2045	2020-2040 CHANGE
City of Los Angeles	3,933,800	4,771,300	21.3%
City of West Hollywood	36,700	42,600	16.1%
Los Angeles County	10,110,000	11,674,000	15.5%
SCAG 6-County Area	18,832,000	22,504,000	19.5%

Source: SCAG 2020b

TABLE 3.5-2. HOUSEHOLD GROWTH (2016-2045)

AREA	2016	2045	2020-2040 CHANGE
City of Los Angeles	1,367,000	1,793,000	31.2%
City of West Hollywood	26,000	30,100	15.8%
Los Angeles County	3,319,000	4,119,000	24.1%
SCAG 6-County Area	6,012,000	7,633,000	27.0%

Source: SCAG 2020b

TABLE 3.5-3. EMPLOYMENT GROWTH (2016-2045)

AREA	2016	2045	2020-2040 CHANGE
City of Los Angeles	1,848,300	2,135,900	15.6%
City of West Hollywood	21,700	38,100	75.6%
Los Angeles County	4,743,000	5,382,000	13.5%
SCAG 6-County Area	8,389,000	10,049,000	19.8%

Source: SCAG 2020b

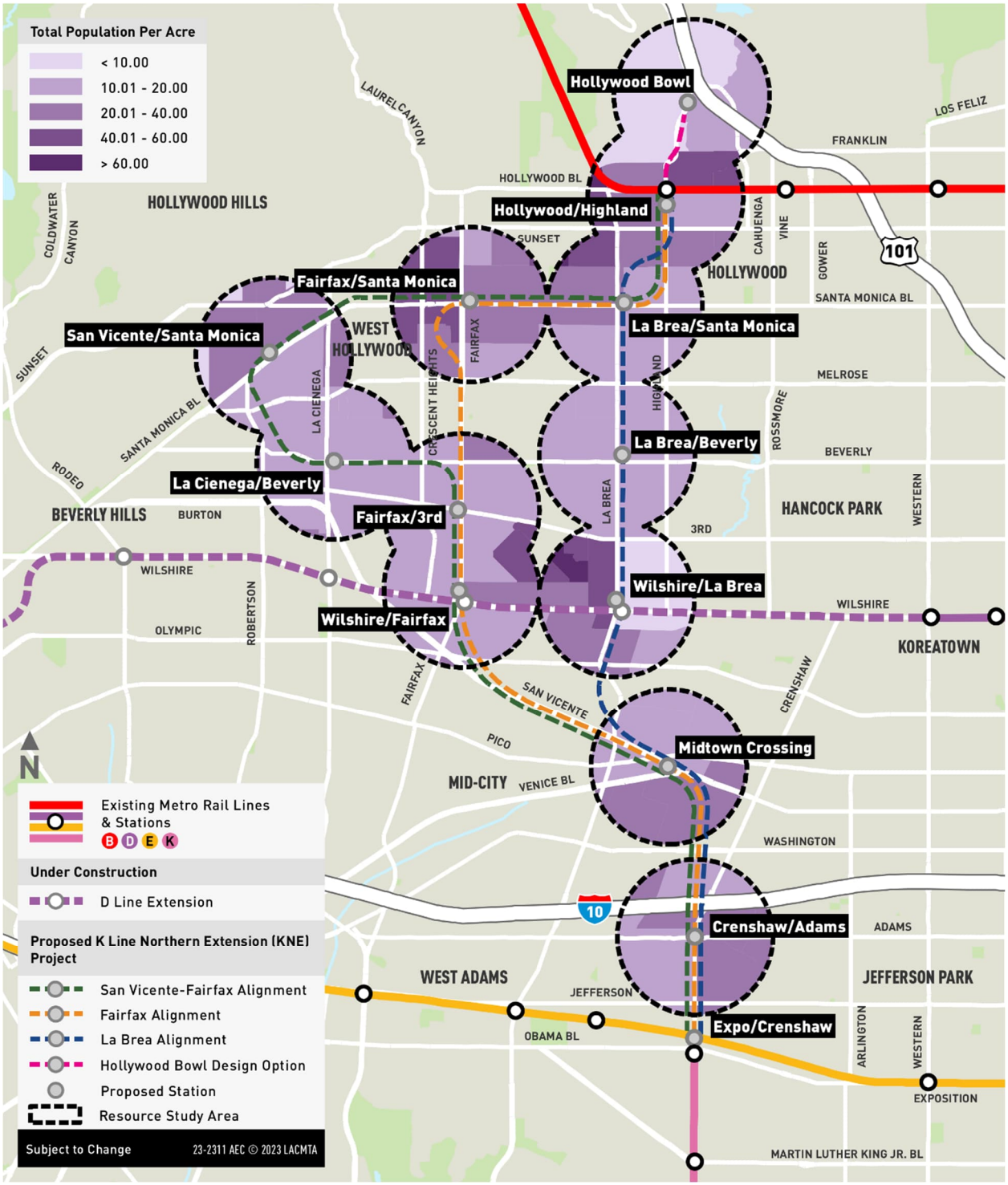
In terms of projected growth, SCAG's RHNA for the planning years January 1, 2006 through June 30, 2014 projected a need for the construction of an additional 584 housing units within the City of West Hollywood, allocated as follows: very low-income (142 units), low-income (91 units), moderate income (99 units), and above moderate income (252 units). Approved in March 2021, the 2021 SCAG 6th Cycle Final RHNA Allocation Plan for the planning years October 2021 through October 2029 cites the need for a total of 3,933 housing units, 1,755 of which would be affordable to lower-income households, to be accommodated by local plans and housing jurisdictions. Construction of new housing is not mandated by the RHNA, which is intended as a planning tool and a guide to an equitable distribution of housing.

In accordance with SCAG's 6th Cycle Final RHNA Allocation Plan, the City of Los Angeles 2021-2029 Housing Element must accommodate a total of 456,643 units, of which 184,721 units must be affordable to lower-income households. To ensure that sufficient capacity exists in the Housing Element to accommodate the RHNA throughout the planning period, the plan sets a target capacity (or buffer) that is 10 percent higher than the RHNA for lower-income units, and 15 percent higher than the RHNA for moderate-income units. This results in a target capacity for the Adequate Sites Inventory and Rezoning Program of 486,379 units.

3.5.5.2 ALIGNMENTS AND STATIONS

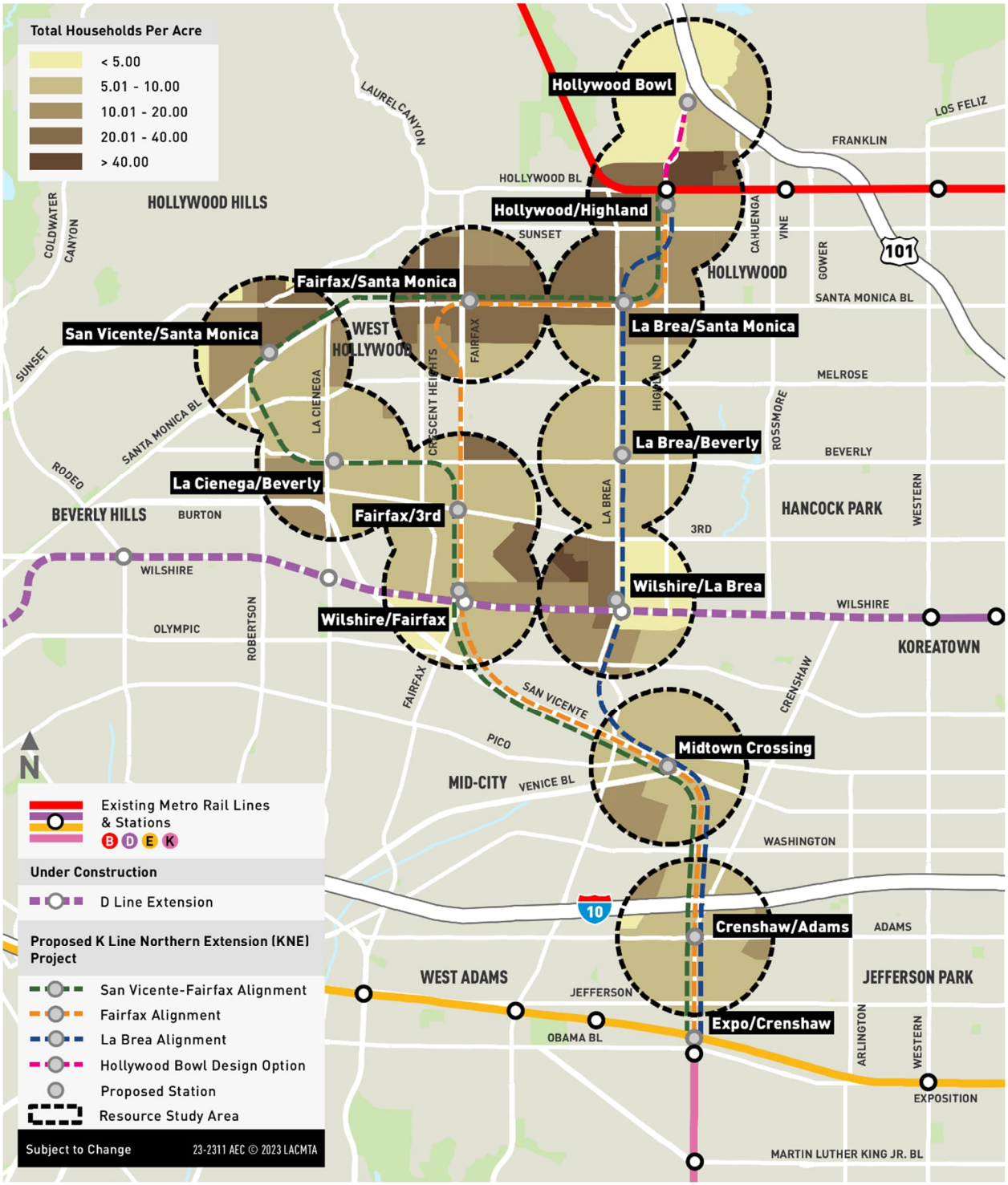
Demographic information presented in this section was evaluated for a 0.5-mile area around each station. The 2020 SCAG RTP/SCS data were used for historic and forecasted growth projections for population, housing, and employment. This report uses 2020 SCAG RTP/SCS data for existing employment. The U.S. Census Bureau 2021 5-year Estimates were used for existing population and households. Equity Focused Communities (EFCs) were identified from the U.S. Census Bureau 2021 5-year Estimates. Notable EFCs are found within the Crenshaw/Adams, Hollywood/Highland, and Hollywood Bowl Station RSAs. Existing population, households, and employment within these RSAs for each alignment are shown in Figure 3.5-1 through Figure 3.5-3.

FIGURE 3.5-1. EXISTING POPULATION WITHIN STATION RESOURCE STUDY AREAS (2021)



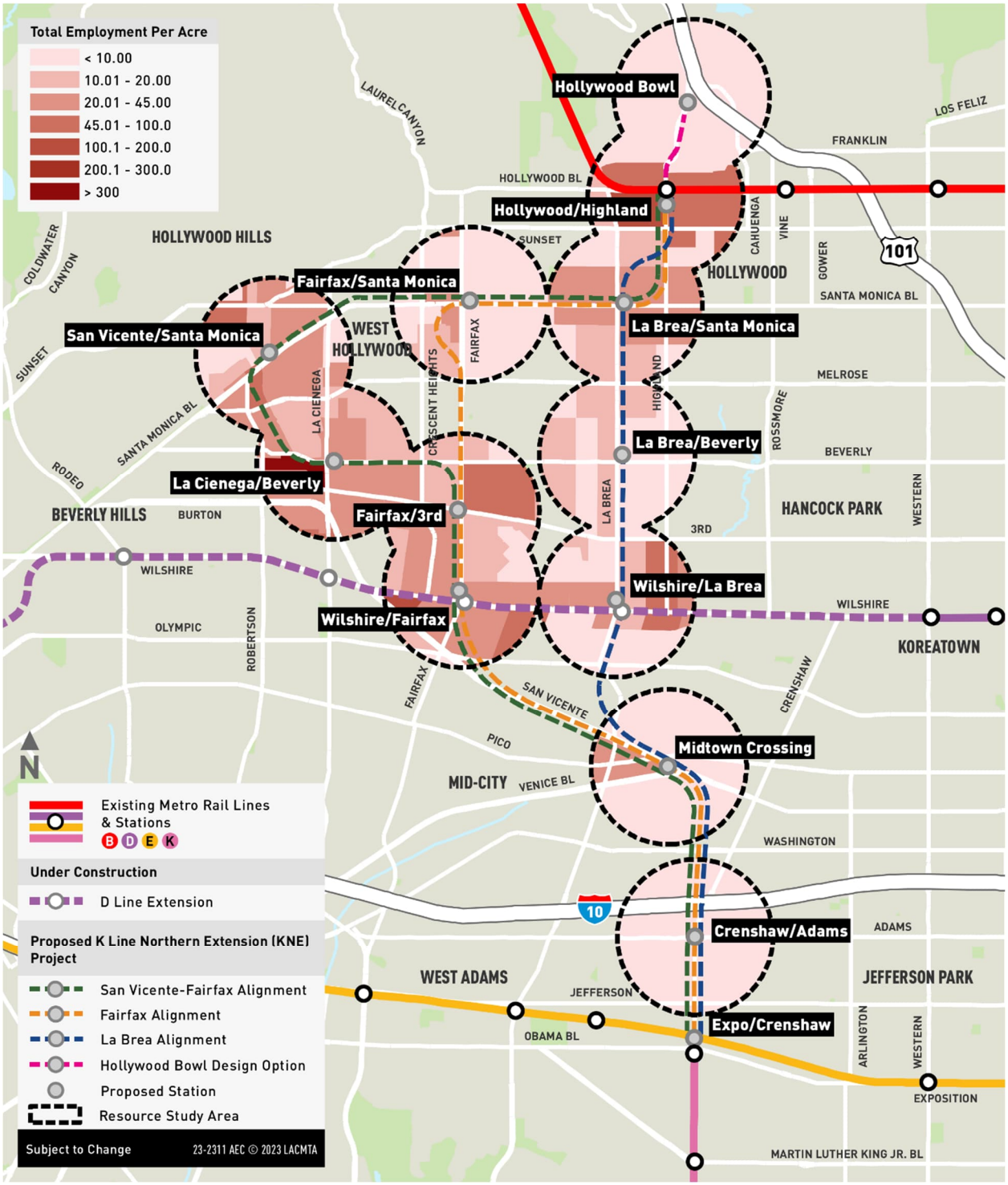
Source: U.S. Census Bureau 2021a

FIGURE 3.5-2. EXISTING HOUSEHOLDS WITHIN STATION RESOURCE STUDY AREAS (2021)



Source: U.S. Census Bureau 2021c

FIGURE 3.5-3. EXISTING EMPLOYMENT WITHIN STATION RESOURCE STUDY AREAS (2019)



Source: SCAG 2020a

3.5.5.2.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.5.5.2.1.1 EXISTING POPULATION, HOUSEHOLDS, AND EMPLOYMENT

A summary of existing population, households, and employment within a 0.5 mile of the KNE San Vicente–Fairfax Alignment stations is provided in Table 3.5-4, which includes existing demographic characteristics for each station RSA. Residential land use designations for the Cities of Los Angeles and West Hollywood are described in this section for reference.

TABLE 3.5-4. EXISTING POPULATION, HOUSEHOLDS, AND EMPLOYMENT WITHIN THE KNE SAN VICENTE–FAIRFAX ALIGNMENT RESOURCE STUDY AREA (2019 AND 2021)

ALIGNMENT/STATION NAME	2021 POPULATION TOTAL	2021 HOUSEHOLD TOTAL[1]	2019 EMPLOYMENT TOTAL
SAN VICENTE–FAIRFAX ALIGNMENT			
Crenshaw/Adams Station	10,955	4,340	2,112
Midtown Crossing Station	10,846	4,092	3,219
Wilshire/Fairfax Station	10,315	5,121	15,474
Fairfax/3rd Station	10,410	5,074	14,742
La Cienega/Beverly Station	8,173	4,657	30,895
San Vicente/Santa Monica Station	11,129	7,178	13,343
Fairfax/Santa Monica Station	15,575	9,507	4,235
La Brea/Santa Monica Station	12,467	7,142	10,004
Hollywood/Highland Station	14,207	8,972	20,373
Hollywood Bowl Design Option	5,977	3,656	1,488
San Vicente–Fairfax Alignment Corridor Totals[2]	**97,903**	**53,243**	**108,070**

Source: U.S. Census Bureau 2021a, 2021e; SCAG 2020a

[1] Household total equals the total number of household units. A housing unit may be a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (or, if vacant, intended for occupancy) as separate living quarters (Table ID: B25001).

[2] Due to overlapping station RSAs, as shown in Figure 3.5-1, Figure 3.5-2, and Figure 3.5-3, the KNE San Vicente–Fairfax Alignment Corridor totals are less than the summation of all the station RSAs combined as the corridor total does not account for redundancy in data.

3.5.5.2.1.2 EXISTING EQUITY FOCUSED COMMUNITIES

A summary of existing EFCs within station RSAs for the KNE San Vicente–Fairfax Alignment is provided in Table 3.5-5 (Low-Income Populations), Table 3.5-6 (Minority Populations), and Table 3.5-7 (Zero-Car Households).

TABLE 3.5-5. LOW-INCOME POPULATIONS WITHIN THE KNE SAN VICENTE–FAIRFAX ALIGNMENT RESOURCE STUDY AREA (2021)

ALIGNMENT/STATION NAME	POPULATION TOTAL	POPULATION BELOW POVERTY LEVEL[1]	PERCENT BELOW POVERTY	POPULATION ABOVE POVERTY LEVEL	PERCENT ABOVE POVERTY
SAN VICENTE–FAIRFAX ALIGNMENT					
Crenshaw/Adams Station	10,955	2,176	20%	8,779	80%
Midtown Crossing Station	10,846	1,378	13%	9,468	87%
Wilshire/Fairfax Station	10,315	1,035	10%	9,280	90%
Fairfax/3rd Station	10,410	1,059	10%	9,351	90%
La Cienega/Beverly Station	8,173	792	10%	7381	90%
San Vicente/Santa Monica Station	11,129	1,090	10%	10,039	90%
Fairfax/Santa Monica Station	15,575	2,101	13%	13,474	87%
La Brea/Santa Monica Station	12,467	1,890	15%	10,577	85%
Hollywood/Highland Station	14,207	2,513	18%	11,694	82%
Hollywood Bowl Design Option	5,977	1,031	17%	4,946	83%
San Vicente–Fairfax Alignment Corridor Totals[2]	**97,903**	**13,211**	**14%**	**84,692**	**86%**

Source: U.S. Census Bureau 2021d

[1] Population below poverty level includes the poverty status of individuals in the past 12 months by living arrangement (Table ID: B17021).

[2] Due to overlapping station RSAs, as shown in Figure 3.5-1, Figure 3.5-2, and Figure 3.5-3, the KNE San Vicente–Fairfax Alignment Corridor totals are less than the summation of all the station RSAs combined as the corridor total does not account for redundancy in data.

TABLE 3.5-6. MINORITY POPULATIONS WITHIN THE KNE SAN VICENTE–FAIRFAX ALIGNMENT RESOURCE STUDY AREA (2021)

ALIGNMENT/STATION NAME	POPULATION TOTAL	MINORITY POPULATION[1,2]	PERCENT MINORITY	LARGEST MINORITY GROUP (% OF AREA POPULATION)
SAN VICENTE–FAIRFAX ALIGNMENT				
Crenshaw/Adams Station	10,955	7,935	72.43%	Hispanic or Latino (51%)
Midtown Crossing Station	10,846	7,072	65.20%	Hispanic or Latino (48%)
Wilshire/Fairfax Station	10,315	3,982	38.60%	Asian (20%)
Fairfax/3rd Station	10410	4,005	38.47%	Asian (24%)
La Cienega/Beverly Station	8,173	1,688	20.65%	Hispanic or Latino (7%)
San Vicente/Santa Monica Station	11,129	2,317	20.82%	Hispanic or Latino (9%)
Fairfax/Santa Monica Station	15,575	4,586	29.44%	Hispanic or Latino (18%)
La Brea/Santa Monica Station	12,467	3,953	31.71%	Hispanic or Latino (15%)
Hollywood/Highland Station	14,207	6,168	43.42%	Hispanic or Latino (23%)
Hollywood Bowl Design Option	5,977	2,068	34.60%	Hispanic or Latino (19%)
San Vicente–Fairfax Alignment Corridor Totals[3]	**97,903**	**38,431**	**39.25%%**	**Hispanic or Latino (21%)**

Source: U.S. Census Bureau 2021b

[1] This category includes all responses in the 2021 U.S. Census included in the "Hispanic" or "Latino," ''Black or African American,'' ''American Indian or Alaska Native,'' ''Asian,'' and ''Native Hawaiian or Other Pacific Islander'' race categories described above. Respondents providing write-in entries such as multiracial, mixed, interracial, or a Hispanic/Latino group (for example, Mexican, Puerto Rican, or Cuban) in the ''Some Other Race'' write-in space are included in this category (Table ID: B03002).

[2] Includes those people who chose to provide two or more races on the U.S. Census by checking two or more race response check boxes. There are 57 possible combinations involving the race categories (Black or African American, American Indian and Alaska Native, Asian, Native Hawaiian or Other Pacific Islander, and/or Some Other Race).

[3] Due to overlapping station RSAs, as shown in Figure 3.5-1, Figure 3.5-2, and Figure 3.5-3, the KNE San Vicente–Fairfax Alignment Corridor totals are less than the summation of all the station RSAs combined as the corridor total does not account for redundancy in data.

TABLE 3.5-7. ZERO-CAR HOUSEHOLDS WITHIN THE KNE SAN VICENTE–FAIRFAX ALIGNMENT RESOURCE STUDY AREA (2021)

ALIGNMENT/STATION NAME	HOUSEHOLD TOTAL	ZERO-CAR HOUSEHOLDS	PERCENT OF ZERO-CAR HOUSEHOLDS
SAN VICENTE–FAIRFAX ALIGNMENT			
Crenshaw/Adams Station	4,340	580	13%
Midtown Crossing Station	4,092	515	13%
Wilshire/Fairfax Station	5,121	550	11%
Fairfax/3rd Station	5,074	461	9%
La Cienega/Beverly Station	4,657	305	7%
San Vicente/Santa Monica Station	7,178	585	8%
Fairfax/Santa Monica Station	9,507	1,696	18%
La Brea/Santa Monica Station	7,142	987	14%
Hollywood/Highland Station	8,972	2,006	22%
Hollywood Bowl Design Option	3,656	760	21%
San Vicente–Fairfax Alignment Corridor Totals[1]	**53,243**	**7,422**	**14%**

Source: U.S. Census Bureau 2021e (Table ID: DP04)
[1] Due to overlapping station RSAs, as shown in Figure 3.5-1, Figure 3.5-2, and Figure 3.5-3, the KNE San Vicente–Fairfax Alignment Corridor totals are less than the summation of all the station RSAs combined as the corridor total does not account for redundancy in data.

3.5.5.2.1.3 CRENSHAW/ADAMS STATION

The Crenshaw/Adams Station would be located at the intersection of Crenshaw Boulevard and Adams Boulevard. The RSA is located within the West Adams neighborhood, a community recognized for its ethnic diversity and as a historic center for Black American culture.

The West Adams neighborhood is primarily comprised of single-family homes and apartment buildings. The population density at the Crenshaw/Adams Station is generally similar to other stations within the RSA, as shown in Figure 3.5-1. The household density is generally lower than other stations within the RSA, as shown in Figure 3.5-2.

While some local retail and commercial businesses are located along Crenshaw and Adams Boulevards, employment density is low, as shown in Figure 3.5-2. Table 3.5-4 indicates that the total number of jobs is low in the Crenshaw/Adams Station RSA. Table 3.5-5 shows that poverty levels at the proposed Crenshaw/Adams Station are the highest within the RSA. EFCs are located to the north of Adams Boulevard and east of Crenshaw Boulevard.

3.5.5.2.1.4 MIDTOWN CROSSING STATION

The Midtown Crossing Station would be located between two commercial shopping centers and surrounded by residential neighborhoods. The station would be located in the Mid-City Neighborhood

Council District, within the Wilshire Community Plan Area (City of Los Angeles 2016). The RSA includes portions of the Mid-Wilshire neighborhood and the Olympic Park Neighborhood Council Districts. The household density at the Midtown Crossing Station is generally lower than at other stations within the RSA, as shown in Figure 3.5-2. The population density is generally similar to other stations within the RSA, as shown in Figure 3.5-1.

The Midtown Crossing Station RSA includes two commercial shopping centers and commercial businesses along La Brea Avenue, Pico Boulevard, and West Boulevard. Employment density is generally low throughout the Midtown Crossing Station RSA with slightly higher concentrations of employment density along the commercial corridors north of Venice Boulevard, as shown in Figure 3.5-3. Table 3.5-4 indicates that the total number of jobs are low at the Midtown Crossing Station RSA.

3.5.5.2.1.5 WILSHIRE/FAIRFAX STATION

The Wilshire/Fairfax Station RSA is located within the Mid-Wilshire neighborhood, which includes major commercial throughfares on Wilshire Boulevard and Fairfax Avenue. Portions of the Wilshire/Fairfax Station RSA are also located in the residential neighborhoods of Beverly Grove and Fairfax. Park La Brea is a residential complex with townhomes and high-rise apartments bounded by Fairfax Avenue, La Brea Avenue, 3rd Street, and 6th Street. As shown in Figure 3.5-2 and Figure 3.5-2, Park La Brea contributes to the heightened population and household density within the Wilshire/Fairfax Station RSA. The remaining portion of the Wilshire/Fairfax Station RSA generally has lower population and housing density than other stations within the RSA.

Museum Row on Wilshire Boulevard is a popular destination and major activity center that includes the Los Angeles County Museum of Art, the Academy Museum of Motion Pictures, the Petersen Automotive Museum, and the La Brea Tar Pits. These cultural attractions, as well as other commercial and office land uses on Wilshire Boulevard and Fairfax Avenue, contribute to the relatively higher employment opportunities along these throughfares, as shown in Figure 3.5-2. Table 3.5-4 indicates that the number of total jobs at this station is similar to, but relatively higher than, the other stations in the RSA.

3.5.5.2.1.6 FAIRFAX/3RD STATION

The Fairfax/3rd Station would be located in the Mid-City neighborhood, Beverly Grove neighborhood, and Fairfax neighborhood. The Fairfax/3rd Station RSA is characterized by its commercial activity. The Original Farmers Market and the Grove Shopping Center are major destinations that attract approximately 20 million combined annual visitors and are adjacent to the Fairfax/3rd Station. 3rd Street is a commercial corridor with retail and dining destinations between Fairfax Avenue and San Vicente Boulevard. Television City is located on Fairfax Avenue and Beverly Boulevard and approximately 0.25 mile north of the proposed Fairfax/3rd Station. According to the Television City 2050 Project Initial Study (Television City Studios 2022), CBS Television City is projected to employ approximately 7,000 people by 2043. These commercial employment centers contribute to the concentrated employment density illustrated in Figure 3.5-2. Table 3.5-4 indicates that the number of total jobs at this station is similar to, but relatively higher than, the other stations in the RSA.

Park La Brea is a residential complex with townhomes and high-rise apartments bounded by Fairfax Avenue, La Brea Avenue, 3rd Street, and 6th Street. As shown in Figure 3.5-2 and Figure 3.5-2, Park La Brea contributes to the heightened population and household density within the Fairfax/3rd Station RSA. Multifamily residences in the Fairfax neighborhood also account for the concentrated population and housing density north of Beverly Boulevard. The remaining portion of the Fairfax/3rd Station RSA generally has lower population and housing density than other stations within the RSA.

3.5.5.2.1.7 LA CIENEGA/BEVERLY STATION

The La Cienega/Beverly Station would provide access to Cedars-Sinai Medical Center and its supporting medical offices and facilities. Cedars-Sinai Medical Center is also one of the largest employers in Los Angeles County with 14,000 full-time staff (Cedars-Sinai 2022). The station would provide access to the Beverly Center, Beverly Connection shopping center, and the retail and dining corridor on 3rd Street. As indicated in Table 3.5-4, the La Cienega/Beverly Station RSA accounts for the highest number of jobs within the KNE San Vicente–Fairfax Alignment due to the presence of Cedars-Sinai Medical Center and these commercial destinations. Figure 3.5-2 illustrates the high employment density within the La Cienega/Beverly Station RSA with the highest concentration of jobs at Cedars-Sinai Medical Center.

The La Cienega/Beverly Station RSA is located on the border between the Beverly Grove neighborhood in the City of Los Angeles and the West Hollywood West neighborhood in the City of West Hollywood. The residential areas primarily consist of single-family homes in addition to a concentration of multifamily condominiums south of Beverly Boulevard and west of La Cienega Boulevard. The La Cienega/Beverly Station RSA generally has lower population density and household density than other stations within the RSA, as illustrated in Figure 3.5-2 and Figure 3.5-2.

3.5.5.2.1.8 SAN VICENTE/SANTA MONICA STATION

The San Vicente/Santa Monica Station RSA is located in the City of West Hollywood and includes major destinations such as the Santa Monica Boulevard entertainment district (Rainbow District), the Melrose Avenue commercial district to the south, the Sunset Strip to the north, and the Pacific Design Center to the southeast. The San Vicente/Santa Monica Station RSA is located in the City of West Hollywood's Norma Triangle, Tri-West, and West Hollywood West neighborhoods. The Tri-West and West Hollywood West neighborhoods are primarily characterized by single-family and low-density multifamily homes (City of West Hollywood 2011). The residences in the Norma Triangle neighborhood are comprised of apartment buildings, condominiums, and single-family homes. The San Vicente/Santa Monica Station RSA generally has similar population and household density compared to other stations within the RSA, as illustrated in Figure 3.5-2 and Figure 3.5-2. The population and household density are concentrated at the Norma Triangle neighborhood within the San Vicente/Santa Monica Station RSA.

Compared to the KNE San Vicente–Fairfax Alignment RSA as a whole, the San Vicente/Santa Monica Station RSA has relatively higher employment, as indicated in Table 3.5-4. Employment density is concentrated along the Sunset Strip, Santa Monica Boulevard, Melrose Avenue, and San Vicente Boulevard, as shown in Figure 3.5-2. The station would provide direct access to the Rainbow District, with potential portal siting on the Santa Monica Boulevard corridor. The area surrounding the San

Vicente/Santa Monica Station often hosts large regional events, such as the annual City of West Hollywood Pride Parade and Halloween Carnaval. The lesbian, gay, bisexual, transgender, and queer (LGBTQ) community accounts for approximately one-third of all residents in the City of West Hollywood (City of West Hollywood 2017), thus contributing to the community demographics of the RSA.

3.5.5.2.1.9 FAIRFAX/SANTA MONICA STATION

The Fairfax/Santa Monica Station would provide access to the Santa Monica commercial corridor and the Santa Monica/Fairfax Transit District in the City of West Hollywood. The Fairfax/Santa Monica Station RSA is located in the City of West Hollywood's Center City and Eastside neighborhoods that are characterized by multifamily homes, large apartment buildings, and condominiums. The Fairfax/Santa Monica Station RSA serves mostly residential uses. Table 3.5-4 shows that the Fairfax/Santa Monica Station has the highest number of households and is the most populous among all stations in the KNE San Vicente–Fairfax Alignment RSA. As shown in Figure 3.5-2, the population and household densities are high throughout the Fairfax/Santa Monica Station RSA. The RSA also captures multiple West Hollywood 6th Cycle Housing Element Opportunity Sites to support affordable housing, particularly along Santa Monica Boulevard.

This RSA is characterized by small storefronts, restaurants, and bars, and includes a concentration of small businesses serving West Hollywood's Russian-speaking community. Neighborhood-oriented retail and shopping centers are located along Santa Monica Boulevard and Fairfax Avenue. While commercial activity is present within the RSA, employment density is relatively low compared to the KNE San Vicente–Fairfax Alignment RSA as a whole. Employment density and the total number of jobs in the Fairfax/Santa Monica Station RSA are shown in Figure 3.5-2 and indicated in Table 3.5-4.

3.5.5.2.1.10 LA BREA/SANTA MONICA STATION

The La Brea Avenue and Santa Monica Boulevard corridors are characterized by Commercial Arterial uses within the City of West Hollywood and light industrial land use in the City of Los Angeles' Media District. Neighborhoods within the La Brea/Santa Monica Station RSA include Hollywood in the City of Los Angeles and the Eastside neighborhood in the City of West Hollywood. The Eastside neighborhood in the City of West Hollywood is known for its diversity of Russian markets and locally oriented shops. Until 2012, the Eastside of West Hollywood was the City's Redevelopment Area, a California state-funded program intended to assist communities in need (City of West Hollywood 2017). More recently, the Eastside neighborhood has witnessed newer businesses and high-density residential towers near La Brea Avenue and Santa Monica Boulevard. The City of Los Angeles Hollywood Community Plan identifies the Media District as an area bounded by La Brea Avenue, Vine Street, Fountain Avenue, and Waring Avenue (City of Los Angeles 2021).

The La Brea/Santa Monica Station RSA generally has similar population and household densities compared to other stations within the KNE San Vicente–Fairfax Alignment RSA as a whole, as illustrated in Figure 3.5-2 and Figure 3.5-2. West of La Brea Avenue between Santa Monica Boulevard and Fountain Avenue, the City of West Hollywood has a high concentration of population and household density. Similarly, apartment complexes in the City of Los Angeles west of La Brea Avenue and north of Fountain

Avenue contribute to the heightened population and household density in the La Brea/Santa Monica Station RSA.

The Media District focuses on preserving and promoting Hollywood's entertainment industry by retaining light industrial land use for jobs relating to pre- and post-production studios for film, photography, broadcasting, and sound recording. As shown in Figure 3.5-2, employment density exhibits some concentration within the Media District's boundaries and along West Hollywood's commercial corridors on La Brea Avenue and Santa Monica Boulevard. The La Brea/Santa Monica Station generally has similar employment density in comparison to the KNE San Vicente–Fairfax Alignment RSA as a whole.

3.5.5.2.1.11 HOLLYWOOD/HIGHLAND STATION

The Hollywood/Highland Station is located within an iconic tourist district and surrounded by dense residential neighborhoods. The Hollywood/Highland Station RSA falls within the Hollywood and Hollywood Heights neighborhoods in the City of Los Angeles.

Table 3.5-4 shows that the Hollywood/Highland Station has a high population and number of households compared to other stations in the KNE San Vicente–Fairfax Alignment RSA. Apartment buildings and some residential towers are located throughout the Hollywood/Highland Station RSA. Apartment buildings between Hollywood Boulevard and Franklin Avenue account for the higher population density along these corridors, as shown in Figure 3.5-2. Population density and household densities are lower in the Hollywood Heights neighborhood located east of Highland Avenue and north of Franklin Avenue. A small concentration of EFCs is located west of La Brea Avenue between Sunset Boulevard and Hollywood Boulevard.

The intersection of Hollywood Boulevard and Highland Avenue includes major tourist destinations such as the Hollywood Walk of Fame, the Dolby Theatre, the TCL Chinese Theatre (Grauman's Theatre), and the Hollywood Museum. The RSA includes the Ovation Hollywood shopping center, office, retail, and hotels serving the tourist industry. A separate Tourism District Overlay Zone, created by the local Property-Based Business Improvement District, is also located within the RSA. As indicated in Table 3.5-4, the Hollywood/Highland Station RSA accounts for a high number of jobs. As shown in Figure 3.5-2, the RSA shows high employment densities, especially along Hollywood Boulevard and Sunset Boulevard. Table 3.5-7 shows a high number of zero-vehicle households in the RSA, which is also supported by existing Metro B Line services.

3.5.5.2.2 KNE FAIRFAX ALIGNMENT

3.5.5.2.2.1 EXISTING POPULATION, HOUSEHOLDS, AND EMPLOYMENT

A summary of existing population, households, and employment within a 0.5 mile of the stations for the KNE Fairfax Alignment is provided in Table 3.5-8. Existing demographic characteristics within the RSA for each station are described in the following subsections.

TABLE 3.5-8. EXISTING POPULATION, HOUSEHOLDS, AND EMPLOYMENT WITHIN THE KNE FAIRFAX ALIGNMENT RESOURCE STUDY AREA (2019 AND 2021)

ALIGNMENT/STATION NAME	2021 POPULATION TOTAL	2021 HOUSEHOLD TOTAL[1]	2019 EMPLOYMENT TOTAL
FAIRFAX ALIGNMENT			
Crenshaw/Adams Station	10,955	4,340	2,112
Midtown Crossing Station	10,846	4,092	3,219
Wilshire/Fairfax Station	10,315	5,121	15,474
Fairfax/3rd Station	10,410	5,074	14,742
Fairfax/Santa Monica Station	15,575	9,507	4,235
La Brea/Santa Monica Station	12,467	7,142	10,004
Hollywood/Highland Station	14,207	8,972	20,373
Hollywood Bowl Design Option	5,977	3,656	1,488
KNE Fairfax Alignment Corridor Totals[2]	**79,840**	**42,142**	**65,534**

Source: U.S. Census Bureau 2021a, 2021c; SCAG 2020a

[1] Household total equals the total number of household units. A housing unit may be a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (or, if vacant, intended for occupancy) as separate living quarters (Table ID: B25001).

[2] Due to overlapping station RSAs, as shown in Figure 3.5-1, Figure 3.5-2, and Figure 3.5-3, the KNE Fairfax Alignment corridor totals are less than the summation of all the station RSAs combined as the corridor total does not account for redundancy in data.

3.5.5.2.2.2 EXISTING EQUITY FOCUSED COMMUNITIES

A summary of existing EFCs within the RSA of each station for the KNE Fairfax Alignment is provided in Table 3.5-9 (Low-Income Populations), Table 3.5-10 (Minority Populations), and Table 3.5-11 (Zero-Car Households).

TABLE 3.5-9. LOW-INCOME POPULATIONS WITHIN THE KNE FAIRFAX ALIGNMENT RESOURCE STUDY AREA (2021)

ALIGNMENT/STATION NAME	POPULATION TOTAL	POPULATION BELOW POVERTY LEVEL[1]	PERCENT BELOW POVERTY	POPULATION ABOVE POVERTY LEVEL	PERCENT ABOVE POVERTY
FAIRFAX ALIGNMENT					
Crenshaw/Adams Station	10,955	2,176	20%	8,779	80%
Midtown Crossing Station	10,846	1,378	13%	9,468	87%
Wilshire/Fairfax Station	10,315	1,035	10%	9,280	90%
Fairfax/3rd Station	10,410	1,059	10%	9,351	90%
Fairfax/Santa Monica Station	15,575	2,101	13%	13,474	87%
La Brea/Santa Monica Station	12,467	1890	15%	10,577	85%
Hollywood/Highland Station	14,207	2,513	18%	11,694	82%
Hollywood Bowl Design Option	5,977	1,031	17%	4,946	83%
KNE Fairfax Corridor Totals [2]	**79,840**	**11,461**	**14%**	**68,379**	**86%**

Source: U.S. Census Bureau 2021d

[1] Population below poverty level includes the poverty status of individuals in the past 12 months by living arrangement (Table ID: B17021).

[2] Due to overlapping station RSAs, as shown in Figure 3.5-1, Figure 3.5-2, and Figure 3.5-3, the KNE Fairfax Alignment corridor totals are less than the summation of all the station RSAs combined as the corridor total does not account for redundancy in data.

TABLE 3.5-10. MINORITY POPULATIONS WITHIN THE KNE FAIRFAX ALIGNMENT RESOURCE STUDY AREA (2021)

ALIGNMENT/STATION NAME	POPULATION TOTAL	MINORITY POPULATION[1,2]	PERCENT MINORITY	LARGEST MINORITY GROUP (% OF AREA POPULATION)
FAIRFAX ALIGNMENT				
Crenshaw/Adams Station	10,955	7,935	72.43%	Hispanic or Latino (51%)
Midtown Crossing Station	10,846	7,072	65.20%	Hispanic or Latino (48%)
Wilshire/Fairfax Station	10,315	3,982	38.60%	Asian (20%)
Fairfax/3rd Station	10410	4,005	38.47%	Asian (24%)
Fairfax/Santa Monica Station	15,575	4,586	29.44%	Hispanic or Latino (18%)
La Brea/Santa Monica Station	12,467	3,953	31.71%	Hispanic or Latino (15%)
Hollywood/Highland Station	14,207	6,168	43.42%	Hispanic or Latino (23%)
Hollywood Bowl Design Option	5,977	2,068	34.60%	Hispanic or Latino (19%)
KNE Fairfax Alignment Corridor Totals[3]	**79,840**	**34,652**	**43.4%**	**Hispanic or Latino (24%)**

Source: U.S. Census Bureau 2021b

[1] This category includes all responses in the 2021 U.S. Census included in the' "Hispanic" or "Latino", "Black or African American," "American Indian or Alaska Native," "Asian," and "Native Hawaiian or Other Pacific Islander" race categories. Respondents providing write-in entries such as multiracial, mixed, interracial, or a Hispanic/Latino group (for example, Mexican, Puerto Rican, or Cuban) in the "Some Other Race" write-in space are included in this category (Table ID: B03002).

[2] Includes those people who chose to provide two or more races on the U.S. Census by checking two or more race response check boxes. There are 57 possible combinations involving the race categories (Black or African American, American Indian and Alaska Native, Asian, Native Hawaiian or Other Pacific Islander, and/or Some Other Race).

[3] Due to overlapping station RSAs, as shown in Figure 3.5-1, Figure 3.5-2, and Figure 3.5-3, the KNE Fairfax Alignment corridor totals are less than the summation of all the station RSAs combined as the corridor total does not account for redundancy in data.

TABLE 3.5-11. ZERO-CAR HOUSEHOLDS WITHIN THE KNE FAIRFAX ALIGNMENT RESOURCE STUDY AREA (2021)

ALIGNMENT/STATION NAME	HOUSEHOLD TOTAL	ZERO-CAR HOUSEHOLDS	PERCENT OF ZERO-CAR HOUSEHOLDS
FAIRFAX ALIGNMENT			
Crenshaw/Adams Station	4,340	580	13%
Midtown Crossing Station	4,092	515	13%
Wilshire/Fairfax Station	5,121	550	11%
Fairfax/3rd Station	5,074	461	9%
Fairfax/Santa Monica Station	9,507	1,696	18%
La Brea/Santa Monica Station	7,142	987	14%
Hollywood/Highland Station	8,972	2,006	22%
Hollywood Bowl Design Option	3,656	760	21%
KNE Fairfax Alignment Corridor Totals[1]	**42,142**	**6,584**	**16%**

Source: U.S. Census Bureau 2021c, 2021e (Table ID: DP04)
[1] Due to overlapping station RSAs, as shown in Figure 3.5-1, Figure 3.5-2, and Figure 3.5-3, the KNE Fairfax Alignment corridor totals are less than the summation of all the station RSAs combined as the corridor total does not account for redundancy in data.

3.5.5.2.2.3 CRENSHAW/ADAMS STATION

The Crenshaw/Adams Station is the same as the KNE San Vicente–Fairfax Alignment.

3.5.5.2.2.4 MIDTOWN CROSSING STATION

The Midtown Crossing Station is the same as the KNE San Vicente–Fairfax Alignment.

3.5.5.2.2.5 WILSHIRE/FAIRFAX STATION

The Wilshire/Fairfax Station is the same as the KNE San Vicente–Fairfax Alignment.

3.5.5.2.2.6 FAIRFAX/3RD STATION

The Fairfax/3rd Station is the same as the KNE San Vicente–Fairfax Alignment.

3.5.5.2.2.7 FAIRFAX/SANTA MONICA STATION

The Fairfax/Santa Monica Station is the same as the KNE San Vicente–Fairfax Alignment.

3.5.5.2.2.8 LA BREA/SANTA MONICA STATION

The La Brea/Santa Monica Station is the same as the KNE San Vicente–Fairfax Alignment.

3.5.5.2.2.9 HOLLYWOOD/HIGHLAND STATION

The Hollywood/Highland Station is the same as the KNE San Vicente–Fairfax Alignment.

3.5.5.2.3 KNE LA BREA ALIGNMENT

3.5.5.2.3.1 EXISTING POPULATION, HOUSEHOLDS, AND EMPLOYMENT

A summary of existing population, households, and employment within a 0.5 mile of stations for the KNE La Brea Alignment is provided in Table 3.5-12. Existing demographic characteristics within the RSA for each station are described in the following subsections.

TABLE 3.5-12. EXISTING POPULATION, HOUSEHOLDS, AND EMPLOYMENT WITHIN THE KNE LA BREA ALIGNMENT RESOURCE STUDY AREA (2019 AND 2021)

ALIGNMENT/STATION NAME	2021 POPULATION TOTAL	2021 HOUSEHOLD TOTAL[1]	2019 EMPLOYMENT TOTAL
LA BREA ALIGNMENT			
Crenshaw/Adams Station	10,955	4,340	2,112
Midtown Crossing Station	10,846	4,092	3,219
Wilshire/La Brea Station	12,361	6,615	9,417
La Brea/Beverly Station	7,323	3,046	5,200
La Brea/Santa Monica Station	13,590	7,849	10,292
Hollywood/Highland Station	14,207	8,972	20,373
Hollywood Bowl Design Option	5,977	3,656	1,488
KNE La Brea Alignment Corridor Totals[2]	**67,966**	**34,431**	**48,612**

Source: U.S. Census Bureau 2021a, 2021e; SCAG 2020a
[1] Household total equals the total number of household units. A housing unit may be a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (or, if vacant, intended for occupancy) as separate living quarters (Table ID: B25001).
[2] Due to overlapping station RSAs, as shown in Figure 3.5-1, Figure 3.5-2, and Figure 3.5-3, the KNE La Brea Alignment corridor totals are less than the summation of all the station RSAs combined as the corridor total does not account for redundancy in data.

3.5.5.2.3.2 EXISTING EQUITY FOCUSED COMMUNITIES

A summary of existing EFCs within the RSA of each station for the KNE La Brea Alignment is provided in Table 3.5-13 (Low-Income Populations), Table 3.5-14 (Minority Populations), and Table 3.5-15 (Zero-Car Households).

TABLE 3.5-13. LOW-INCOME POPULATIONS WITHIN THE KNE LA BREA ALIGNMENT RESOURCE STUDY AREA (2021)

ALIGNMENT/STATION NAME	POPULATION TOTAL	POPULATION BELOW POVERTY LEVEL[1]	PERCENT BELOW POVERTY	POPULATION ABOVE POVERTY LEVEL	PERCENT ABOVE POVERTY
LA BREA ALIGNMENT					
Crenshaw/Adams Station	10,955	2,176	20%	8,779	80%
Midtown Crossing Station	10,846	1,378	13%	9,468	87%
Wilshire/La Brea Station	12,361	15,93	13%	10,768	87%
La Brea/Beverly Station	7,323	383	5%	6,940	95%
La Brea/Santa Monica Station	13,590	2,006	15%	11,584	85%
Hollywood/Highland Station	14,207	2,513	18%	11,694	82%
Hollywood Bowl Design Option	5,977	1,031	17%	4,946	83%
KNE La Brea Alignment Corridor Totals[2]	**67,966**	**9,723**	**14**	**58,243**	**86%**

Source: U.S. Census Bureau 2021d

[1] Population below poverty level includes the poverty status of individuals in the past 12 months by living arrangement (Table ID: B17021).

[2] Due to overlapping station RSAs, as shown in Figure 3.5-1, Figure 3.5-2, and Figure 3.5-3, the KNE La Brea Alignment corridor totals are less than the summation of all the station RSAs combined as the corridor total does not account for redundancy in data.

TABLE 3.5-14. MINORITY POPULATIONS WITHIN THE KNE LA BREA ALIGNMENT RESOURCE STUDY AREA (2021)

ALIGNMENT/STATION NAME	POPULATION TOTAL	MINORITY POPULATION[1,2]	PERCENT MINORITY	LARGEST MINORITY GROUP (% OF AREA POPULATION)
LA BREA ALIGNMENT				
Crenshaw/Adams Station	10,955	7,935	72.43%	Hispanic or Latino (51%)
Midtown Crossing Station	10,846	7,072	65.20%	Hispanic or Latino (48%)
Wilshire/La Brea Station	12,361	5,245	42.43%	Asian (21%)
La Brea/Beverly Station	7,323	1,058	14.45%	Hispanic or Latino (8%)
La Brea/Santa Monica Station	12,467	3,953	31.71%	Hispanic or Latino (15%)
Hollywood/Highland Station	14,207	6,168	43.42%	Hispanic or Latino (23%)
Hollywood Bowl Design Option	5,977	2,068	34.60%	Hispanic or Latino (19%)
KNE La Brea Alignment Corridor Totals[3]	**67,966**	**30,315**	**44.6%**	**Hispanic or Latino (26%)**

Source: U.S. Census Bureau 2021b

[1] This category includes all responses in the 2021 U.S. Census included in the "Hispanic or Latino," "Black or African American," "American Indian or Alaska Native," "Asian," and "Native Hawaiian or Other Pacific Islander" race categories. Respondents providing write-in entries such as multiracial, mixed, interracial, or a Hispanic/Latino group (for example, Mexican, Puerto Rican, or Cuban) in the "Some Other Race" write-in space are included in this category (Table ID: B03002).

[2] Includes those people who chose to provide two or more races on the U.S. Census by checking two or more race response check boxes. There are 57 possible combinations involving the race categories (Black or African American, American Indian and Alaska Native, Asian, Native Hawaiian or Other Pacific Islander, and/or Some Other Race).

[3] Due to overlapping station RSAs, as shown in Figure 3.5-1, Figure 3.5-2, and Figure 3.5-3, the KNE La Brea Alignment corridor totals are less than the summation of all the station RSAs combined as the corridor total does not account for redundancy in data.

TABLE 3.5-15. ZERO-CAR HOUSEHOLDS WITHIN THE KNE LA BREA ALIGNMENT RESOURCE STUDY AREA (2021)

ALIGNMENT/STATION NAME	HOUSEHOLD TOTAL	ZERO-CAR HOUSEHOLDS	PERCENT OF ZERO-CAR HOUSEHOLDS
LA BREA ALIGNMENT			
Crenshaw/Adams Station	4,340	580	13%
Midtown Crossing Station	4,092	515	13%
Wilshire/La Brea Station	6,615	541	8%
La Brea/Beverly Station	3,046	201	7%
La Brea/Santa Monica Station	7,849	1,079	14%
Hollywood/Highland Station	8,972	2,006	22%
Hollywood Bowl Design Option	3,656	760	21%
KNE La Brea Alignment Corridor Totals[1]	**34,431**	**4,881**	**14%**

Source: U.S. Census Bureau 2021c, 2021e (Table ID: DP04)
[1]Due to overlapping station RSAs, as shown in Figure 3.5-1, Figure 3.5-2, and Figure 3.5-3, the KNE La Brea Alignment corridor totals are less than the summation of all the station RSAs combined as the corridor total does not account for redundancy in data.

3.5.5.2.3.3 CRENSHAW/ADAMS STATION

The Crenshaw/Adams Station is the same as the KNE San Vicente–Fairfax Alignment.

3.5.5.2.3.4 MIDTOWN CROSSING STATION

The Midtown Crossing Station is the same as the KNE San Vicente–Fairfax Alignment.

3.5.5.2.3.5 WILSHIRE/LA BREA STATION

The Wilshire/La Brea Station would be located at the intersection of two commercial corridors in the Miracle Mile District and would be surrounded by the Mid-Wilshire neighborhood, the La Brea neighborhood, the Citrus Square neighborhood, and portions of the Hancock Park neighborhood. Park La Brea is located east of La Brea Avenue. The neighborhoods east of La Brea Avenue and north of Wilshire Boulevard include portions of the Citrus Square and Hancock Park neighborhoods. The Mid-Wilshire neighborhood is located south of Wilshire Boulevard. Hancock Park and Citrus Square are low-density residential neighborhoods comprised of single-family homes. The Mid-Wilshire neighborhood has a mix of single-family homes and apartment buildings. Park La Brea is a residential complex with townhomes and high-rise apartments. Figure 3.5-2 shows very low population densities in the Citrus Square and Hancock Park neighborhoods and a very high population density at Park La Brea. The Mid-Wilshire neighborhood has a population density similar to other stations within the RSA. The Wilshire/La Brea Station RSA household densities are shown in Figure 3.5-2. Similar to the Wilshire/La Brea Station RSA population densities, very low household densities occur in the Citrus Square and Hancock Park neighborhoods and

very high household density occurs at Park La Brea. The Mid-Wilshire neighborhood has household densities similar to other stations within the RSA.

Employment density varies within the Wilshire/La Brea Station RSA. As shown in Figure 3.5-2, higher employment opportunities occur along Highland Avenue and the Miracle Mile neighborhood along Wilshire Boulevard. Generally, residential areas at Park La Brea and south of Wilshire Boulevard in the Mid-Wilshire neighborhood have low employment densities.

3.5.5.2.3.6 LA BREA/BEVERLY STATION

The La Brea/Beverly Station would be located at the intersection of two commercial corridors surrounded by neighborhoods that primarily consist of single-family homes. The La Brea/Beverly Station RSA would be located in the Fairfax District, the Citrus Square neighborhood, and portions of the Hancock Park neighborhood.

Table 3.5-12 indicates generally low total population and total households within the La Brea/Beverly Station RSA. Figure 3.5-2 and Figure 3.5-2 illustrate low population and household densities. The total number of jobs in this area is relatively low, as indicated in Table 3.5-12. As shown in Figure 3.5-2, employment density is low at the La Brea/Beverly Station RSA. Generally, more jobs are located along La Brea Avenue and Melrose Avenue where retail activity occurs.

3.5.5.2.3.7 LA BREA/SANTA MONICA STATION

The La Brea/Santa Monica Station is the same as the KNE San Vicente–Fairfax Alignment.

3.5.5.2.3.8 HOLLYWOOD/HIGHLAND STATION

The Hollywood/Highland Station is the same as the KNE San Vicente–Fairfax Alignment.

3.5.5.2.4 HOLLYWOOD BOWL DESIGN OPTION

The Hollywood Bowl Design Option would be located in Hollywood and the Hollywood Hills area that includes the Whitley Heights, Hollywood Dell, and Hollywood Heights neighborhoods in the City of Los Angeles. The Hollywood Bowl Design Option would be surrounded by the Los Angeles County-owned Hollywood Bowl facilities. As shown in Figure 3.5-1, population densities are very low since the land area surrounding the Hollywood Bowl Design Option is dedicated to the Hollywood Bowl, Ford Amphitheatre, and undeveloped public facilities uses. The Hollywood Dell neighborhood is located east of Cahuenga Boulevard, and the Whitley Heights and Hollywood Heights neighborhoods are located west of Highland Avenue and north of Franklin Avenue. All neighborhoods are comprised of single-family residences. Population densities within these neighborhoods are low. Household densities mirror the population densities shown in Figure 3.5-2. EFCs exist in the Hollywood Bowl Design Option RSA and are located east of Highland Avenue and south of Franklin Avenue; however, these communities are in closer proximity to the Hollywood/Highland Station.

The Hollywood Bowl is a cultural landmark and regional destination for live music that holds approximately 100 annual events and hosts over one million annual visitors (Los Angeles County 2022). Other activity centers within the station RSA for the Hollywood Bowl Design Option include the Ford Amphitheatre, the Hollywood Heritage Museum, and public parklands. Despite the high volume of activity from the Hollywood Bowl, the station RSA for the Hollywood Bowl Design Option has the lowest employment numbers, as indicated in Table 3.5-4. As shown in Figure 3.5-2, the Hollywood Bowl Design Option RSA shows low employment densities.

3.5.5.2.5 MAINTENANCE AND STORAGE FACILITY

3.5.5.2.5.1 EXISTING POPULATION, HOUSEHOLDS, AND EMPLOYMENT

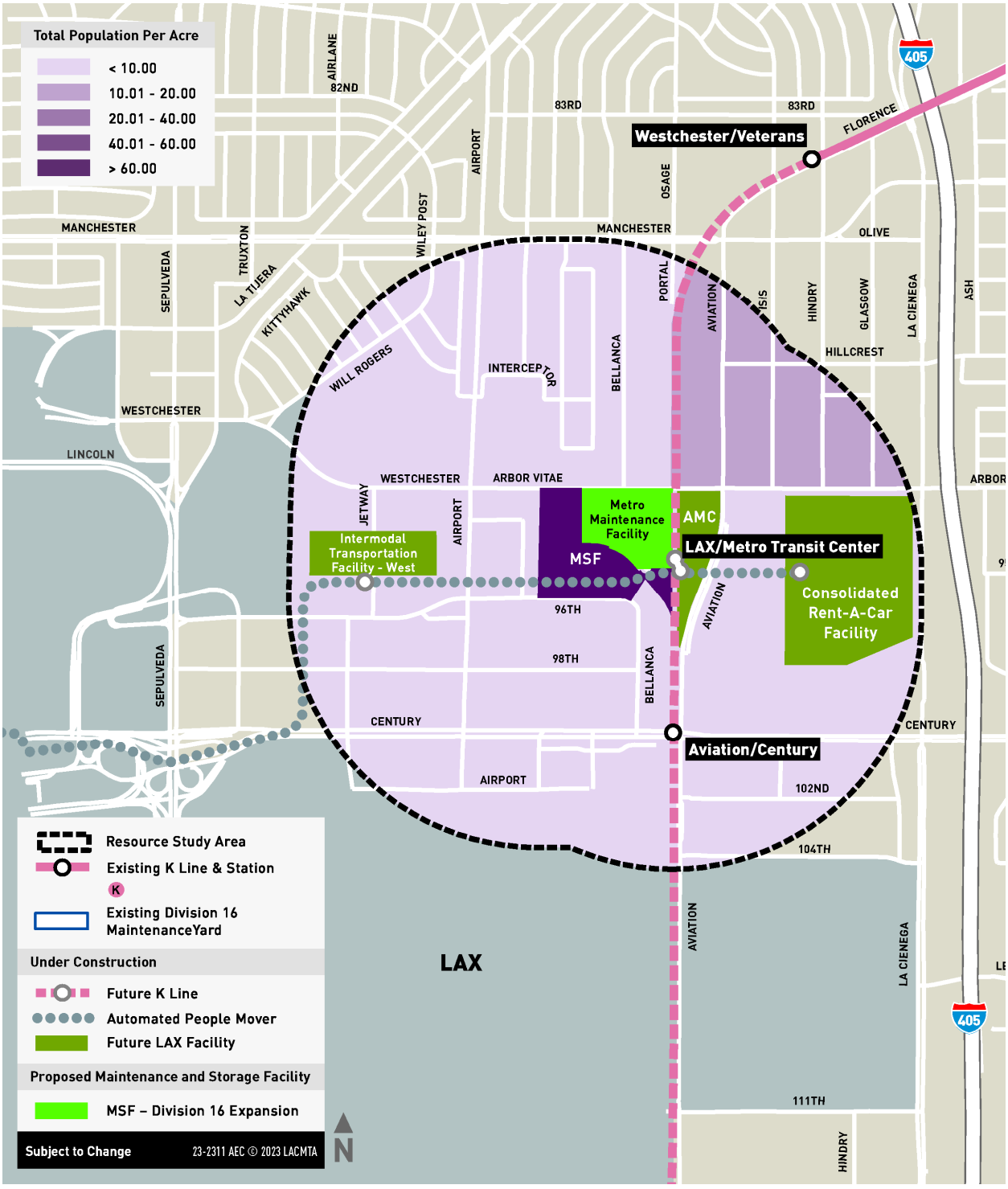
KNE would require an MSF capable of supporting full-service maintenance of project equipment and vehicles. Table 3.5-16 shows the existing population, household, and employment demographic estimates for the MSF. As shown in Table 3.5-2 through Table 3.5-4 above, population, household and employment are estimated to increase approximately 21 percent (population), 31 percent (household), and 16 percent (employment) between 2020 and 2045 in the City of Los Angeles. Figure 3.5-4 through Figure 3.5-6 illustrate existing population, household, and employment within the MSF RSA, respectively.

TABLE 3.5-16. EXISTING POPULATION, HOUSEHOLDS, AND EMPLOYMENT WITHIN MSF RESOURCE STUDY AREA

PROPOSED MSF	2021 POPULATION TOTAL	2021 HOUSEHOLD TOTAL[1]	2019 EMPLOYMENT TOTAL
MSF	3,511	1,428	2,908

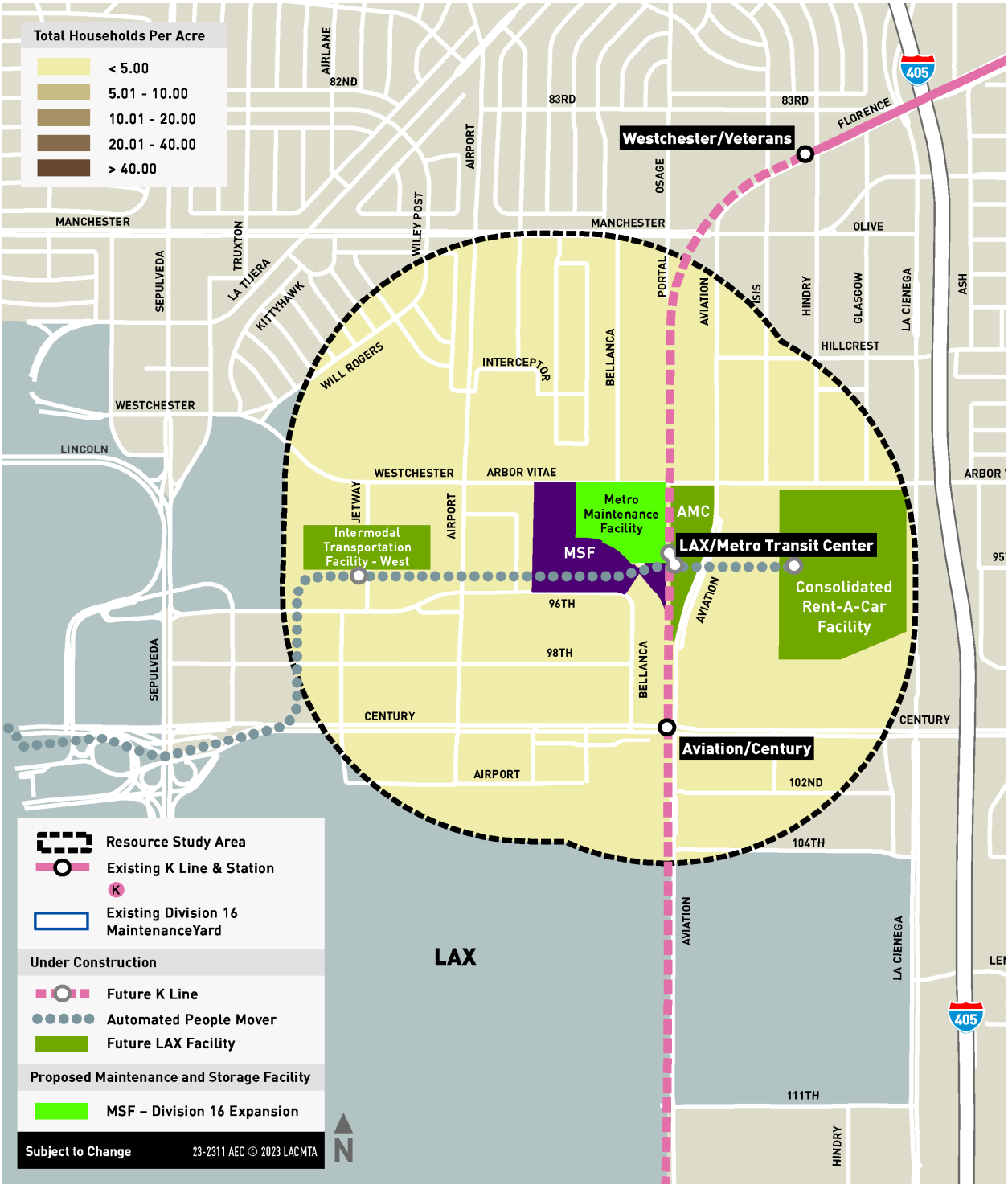
Source: U.S. Census Bureau 2021a, 2021c; SCAG 2020a
[1] Household total equals the total number of household units. A housing unit may be a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (or, if vacant, intended for occupancy) as separate living quarters (Table ID: B25001).

FIGURE 3.5-4. EXISTING POPULATION WITHIN MSF RESOURCE STUDY AREA (2021)



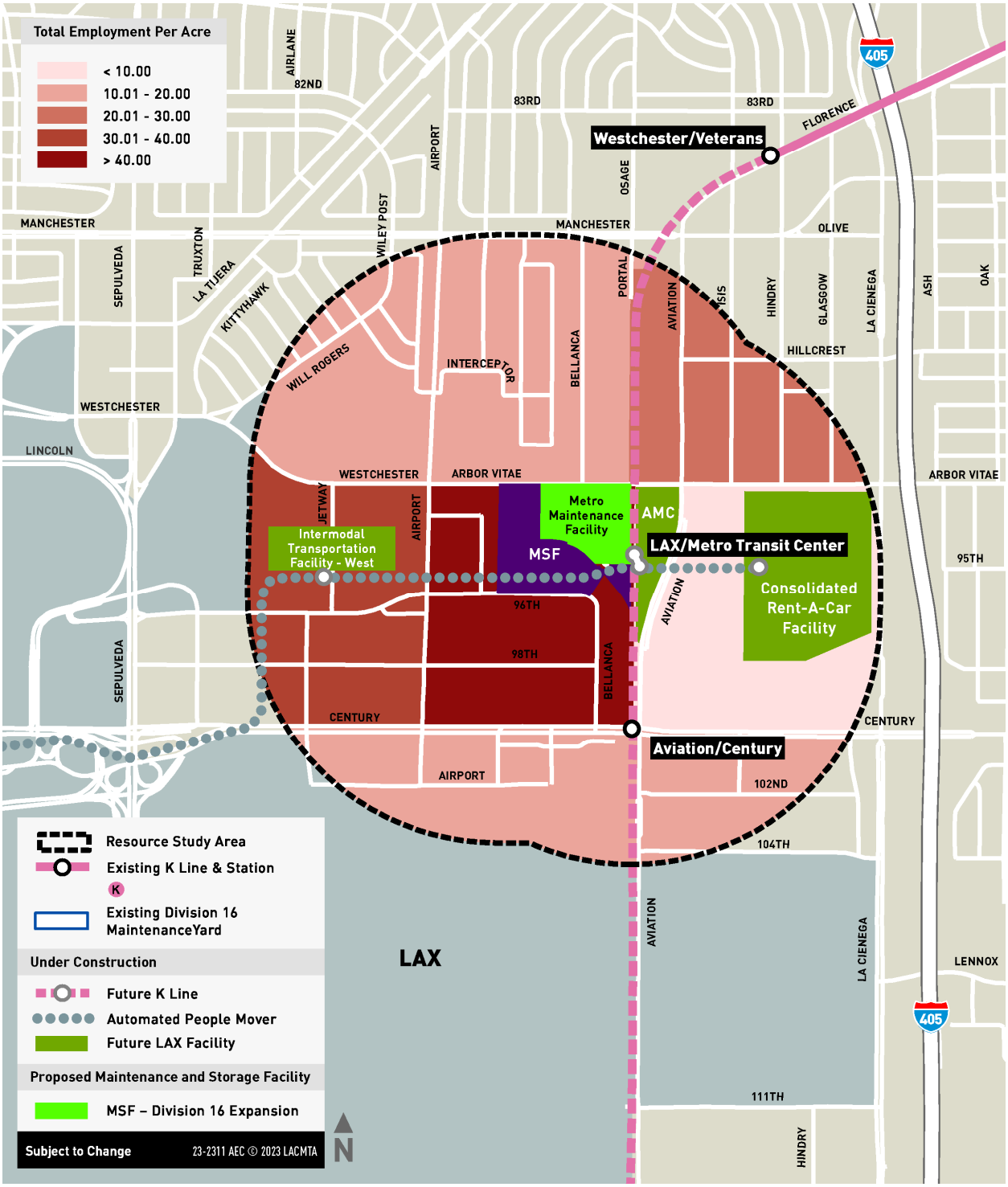
Source: U.S. Census Bureau 2021a

FIGURE 3.5-5. EXISTING HOUSEHOLDS WITHIN MSF RESOURCE STUDY AREA (2021)



Source: U.S. Census Bureau 2021c

FIGURE 3.5-6. EXISTING EMPLOYMENT WITHIN MSF RESOURCE STUDY AREA (2019)



Source: SCAG 2020a

3.5.5.2.5.2 EXISTING EQUITY FOCUSED COMMUNITIES

A summary of EFCs within a 0.5 mile of the MSF RSA is provided in Table 3.5-17 (Low-Income), Table 3.5-18 (Minority), and Table 3.5-19 (Zero-Car Households).

TABLE 3.5-17. LOW-INCOME POPULATIONS WITHIN MSF RESOURCE STUDY AREA (2021)

PROPOSED MSF	POPULATION TOTAL	POPULATION BELOW POVERTY LEVEL[1]	PERCENT BELOW POVERTY	POPULATION ABOVE POVERTY LEVEL	PERCENT ABOVE POVERTY
MSF	3,511	6,05	17%	2,906	83%

Source: U.S. Census Bureau 2021d
[1] Population below poverty level includes the poverty status of individuals in the past 12 months by living arrangement (Table ID: B17021).

TABLE 3.5-18. MINORITY POPULATIONS WITHIN MSF RESOURCE STUDY AREA (2021)

PROPOSED MSF	POPULATION TOTAL	MINORITY POPULATION[1,2]	PERCENT MINORITY	LARGEST MINORITY GROUP (% OF AREA POPULATION)
MSF	3,511	2,182	62.15%	Hispanic or Latino (38%)

Source: U.S. Census Bureau 2021b
[1] This category includes all responses in the 2021 U.S. Census included in the "Hispanic or Latino," "Black or African American," "American Indian or Alaska Native," "Asian," and "Native Hawaiian or Other Pacific Islander" race categories. Respondents providing write-in entries such as multiracial, mixed, interracial, or a Hispanic/Latino group (for example, Mexican, Puerto Rican, or Cuban) in the "Some Other Race" write-in space are included in this category (Table ID: B03002).
[2] Includes those people who chose to provide two or more races on the U.S. Census by checking two or more race response check boxes. There are 57 possible combinations involving the race categories (Black or African American, American Indian and Alaska Native, Asian, Native Hawaiian or Other Pacific Islander, and/or Some Other Race).

TABLE 3.5-19. ZERO-CAR HOUSEHOLDS WITHIN MSF RESOURCE STUDY AREA (2021)

PROPOSED MSF	HOUSEHOLD TOTAL	ZERO-CAR HOUSEHOLDS	PERCENT OF ZERO-CAR HOUSEHOLDS
MSF	1,428	161	11%

Source: U.S. Census Bureau 2021c, 2021e

3.5.6 PROJECT MEASURES

Project measures are design features, best management practices, or other commitments that Metro would implement as part of all proposed alignments and stations, the design option, and the MSF to reduce or avoid environmental effects associated with project construction and operation. Project measures are not the same as mitigation measures, which are used to reduce an environmental impact's significance level. Where applicable, project measures are also discussed in Section 3.5.7 as part of the evaluation of environmental impacts.

No project measures specific to communities, population, and housing have been identified.

3.5.7 IMPACT EVALUATION AND MITIGATION MEASURES

This analysis presents the construction and operational impacts for communities, population, and housing, as well as any applicable mitigation measures associated with KNE. A summary of the impact conclusions and applicable mitigation measures is found in Table 3.5-23 in Section 3.5.7.4.

3.5.7.1 IMPACT CMN-1: UNPLANNED POPULATION GROWTH

Impact CMN-1: Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new housing and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

3.5.7.1.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.5.7.1.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE San Vicente–Fairfax Alignment would result in new temporary employment opportunities; however, most workers would likely come from the existing large labor pool within the greater Los Angeles region and would not need to relocate to the RSA. As a result, growth projections identified in the SCAG 2020 RTP/SCS would not be exceeded. Construction activities associated with the alignment would not induce substantial unplanned population growth, either directly or indirectly. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.5.7.1.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE San Vicente–Fairfax Alignment would not result in substantial changes to existing populations in the station RSAs. The alignment would not include development of new housing or businesses that would directly induce population growth. However, operation of the alignment could indirectly affect growth and development in the station RSAs by enhancing transit connections that could make station areas more desirable locations for residences and businesses, encouraging growth and economic development in the surrounding communities.
Table 3.5-20 As shown in Table 3.5-20, total population growth within a 0.5 mile of the stations is anticipated to increase approximately 37 percent between 2021 and 2045, with the Wilshire/Fairfax Station having the greatest potential population increase, at approximately 62 percent. Household growth between 2021 and 2045 is anticipated to increase by approximately 38 percent, with the Wilshire/Fairfax Station having the greatest percentage of growth increase of approximately 68 percent. Employment growth between 2019 and 2045 is anticipated to increase by approximately 16 percent, with the Fairfax/Santa Monica Station having the greatest percentage of growth increase of approximately 50 percent. The anticipated population, household, and employment growth forecasts within the station RSAs for the alignment are consistent with the City of Los Angeles, City of West Hollywood, and Los Angeles County growth projections.

TABLE 3.5-20. POPULATION, HOUSEHOLD, AND EMPLOYMENT GROWTH WITHIN 0.5 MILE OF PROPOSED STATIONS: KNE SAN VICENTE–FAIRFAX ALIGNMENT

STATION RSA	POPULATION % GROWTH (2021 TO 2045)	HOUSEHOLD % GROWTH (2021 TO 2045)	EMPLOYMENT % GROWTH (2019 TO 2045)
Crenshaw/Adams Station	60.5	63.1	19.6
Midtown Crossing Station	49.2	46.1	21.1
Wilshire/Fairfax Station	62.1	68.1	6.2
Fairfax/3rd Station	42.1	52.4	6.5
La Cienega/Beverly Station	54.5	55.6	6.1
San Vicente/Santa Monica Station	23.8	38.2	46.2
Fairfax/Santa Monica Station	20.5	29.3	49.5
La Brea/Santa Monica Station	15.1	15.0	42.6
Hollywood/Highland Station	37.9	26.4	3.0
Hollywood Bowl Design Option	65.0	52.5	17.4
KNE San Vicente–Fairfax Alignment Corridor Totals	**36.5**	**37.5**	**16.4**

Source: U.S. Census Bureau 2021, SCAG 2020a

State and regional planning programs and policies encourage and incentivize development near transit stations. Metro supports local jurisdictions in developing and adopting transit-supportive policies and programs to leverage the value of transit investments and increase ridership. The project would expand transit service in the region, which could facilitate development around station areas. Any development that could result in the vicinity of the stations would be consistent with local polices and requirements and with local growth projections as set forth in the SCAG 2020 RTP/SCS and would be subject to a separate environmental review and approval process. Operation of the alignment would not induce substantial unplanned population growth, either directly or indirectly. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.5.7.1.2 KNE FAIRFAX ALIGNMENT

3.5.7.1.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE Fairfax Alignment would result in new temporary employment opportunities; however, most workers would likely come from the existing large labor pool within the greater Los Angeles region, who would not need to relocate to the RSA. As a result, growth projections identified in the SCAG 2020 RTP/SCS would not be exceeded. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.5.7.1.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE Fairfax Alignment would not result in substantial changes to existing populations in the station RSAs. The alignment would not include development of new housing or businesses that would directly induce population growth. However, operation of the alignment could indirectly affect growth and development in the station RSAs by enhancing transit connections that could make station areas more desirable locations for residences and businesses, encouraging growth and economic development in the surrounding communities.

As shown in Table 3.5-21, total population growth within a 0.5 mile of the stations is anticipated to increase approximately 36 percent under the alignment between 2021 and 2045, with the Wilshire/Fairfax Station having the greatest potential population increase, at approximately 62 percent. Household growth between 2021 and 2045 is anticipated to increase by approximately 36 percent, with the Wilshire/Fairfax Station having the greatest percentage of growth increase of approximately 68 percent. Employment growth between 2019 and 2045 is anticipated to increase by approximately 15 percent, with the Fairfax/Santa Monica Station having the greatest percentage of growth increase of approximately 50 percent. The anticipated population, household, and employment growth forecasts within the station RSAs for the alignment are consistent with the City of Los Angeles, City of West Hollywood, and Los Angeles County growth projections.

TABLE 3.5-21. POPULATION, HOUSEHOLD, AND EMPLOYMENT GROWTH WITHIN 0.5 MILE OF PROPOSED STATIONS: KNE FAIRFAX ALIGNMENT

STATION RSA	POPULATION % GROWTH (2021 TO 2045)	HOUSEHOLD % GROWTH (2021 TO 2045)	EMPLOYMENT % GROWTH (2019 TO 2045)
Crenshaw/Adams Station	60.5	63.1	19.6
Midtown Crossing Station	49.2	46.1	21.1
Wilshire/Fairfax Station	62.1	68.1	6.2
Fairfax/3rd Station	42.1	52.4	6.5
Fairfax/Santa Monica Station	20.5	29.3	49.5
La Brea/Santa Monica Station	15.1	15.0	42.6
Hollywood/Highland Station	37.9	26.4	3.0
Hollywood Bowl Design Option	65.0	52.5	17.4
KNE Fairfax Alignment Corridor Totals	**36.5**	**35.5**	**14.8**

Source: U.S. Census Bureau 2021, SCAG 2020a

State and regional planning programs and policies encourage and incentivize development near transit stations. Metro supports local jurisdictions in developing and adopting transit-supportive policies and programs to leverage the value of transit investments and increase ridership. The project would expand transit service in the region, which could facilitate development around station areas. Any development that could result in the vicinity of the stations would be consistent with local polices and requirements and with local growth projections as set forth in the SCAG 2020 RTP/SCS and would be subject to a

separate environmental review and approval process. Operation of the alignment would not induce substantial unplanned population growth, either directly or indirectly. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.5.7.1.3 KNE LA BREA ALIGNMENT

3.5.7.1.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE La Brea Alignment would result in new temporary employment opportunities; however, most workers would likely come from the existing large labor pool within the greater Los Angeles region, who would not need to relocate to the RSA. As a result, growth projections identified in the SCAG 2020 RTP/SCS would not be exceeded. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.5.7.1.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE La Brea Alignment would not result in substantial changes to existing populations in the station RSAs. The alignment would not include development of new housing or businesses that would directly induce population growth. However, operation of the alignment could indirectly affect growth and development in the station RSAs by enhancing transit connections that could make station areas more desirable locations for residences and businesses, encouraging growth and economic development in the surrounding communities.

As shown in Table 3.5-22, total population growth within a 0.5 mile of the stations is anticipated to increase approximately 42 percent for the alignment between 2021 and 2045. Household growth between 2021 and 2045 is anticipated to increase by 37 percent, with the Crenshaw/Adams Station having the greatest percentage of growth increase of approximately 63 percent. Employment growth between 2019 and 2045 is anticipated to increase by approximately 16 percent, with the La Brea/Santa Monica Station having the greatest percentage of growth increase of approximately 43 percent.

TABLE 3.5-22. POPULATION, HOUSEHOLD, AND EMPLOYMENT GROWTH WITHIN 0.5 MILE OF PROPOSED STATIONS: KNE LA BREA ALIGNMENT

STATION RSA	POPULATION % GROWTH (2021 TO 2045)	HOUSEHOLD % GROWTH (2021 TO 2045)	EMPLOYMENT % GROWTH (2019 TO 2045)
Crenshaw/Adams Station	60.5	63.1	19.6
Midtown Crossing Station	49.2	46.1	21.1
Wilshire/La Brea Station	53.3	48.6	9.4
La Brea/Beverly Station	34.8	36.4	14.5
La Brea/Santa Monica Station	17.0	17.6	42.7
Hollywood/Highland Station	37.9	26.4	3.0
Hollywood Bowl Design Option	65.0	52.5	17.4
KNE La Brea Alignment Corridor Totals	**41.8**	**36.9**	**15.8**

Source: U.S. Census Bureau 2021, SCAG 2020a

State and regional planning programs and policies encourage and incentivize development near transit stations. Metro supports local jurisdictions in developing and adopting transit-supportive policies and programs to leverage the value of transit investments and increase ridership. The project would expand transit service in the region, which could facilitate development around station areas. Any development that could result in the vicinity of the proposed stations would be consistent with local polices and requirements and with local growth projections as set forth in the SCAG 2020 RTP/SCS and would be subject to a separate environmental review and approval process. Operation of the alignment would not induce substantial unplanned population growth, either directly or indirectly. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.5.7.1.4 HOLLYWOOD BOWL DESIGN OPTION

3.5.7.1.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the Hollywood Bowl Design Option would be similar to the construction activities required for the alignments described above. Construction of the design option would result in new temporary employment opportunities; however, most workers would likely come from the existing large labor pool within the greater Los Angeles region, who would not need to relocate to the RSA. As a result, growth projections identified in the 2020 RTP/SCS would not be exceeded. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.5.7.1.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the Hollywood Bowl Design Option would be similar to the operation activities required for the alignments described above. Operation of the design option would not include development of new housing or businesses that would directly induce population growth. Operation of the design option could indirectly affect growth and development in the RSA by enhancing transit connections that would make station areas more desirable locations for residences and businesses, encouraging growth and economic development in the surrounding communities.

As shown in Table 3.5-20, total population growth within the RSA for the design option is anticipated to increase approximately 65 percent between 2021 and 2045. Household growth is anticipated to increase by 53 percent, and employment growth is anticipated to increase by approximately 17 percent. However, the anticipated population, household, and employment growth forecasts within the RSA for the Hollywood Bowl Design Option are consistent with the City of Los Angeles and County of Los Angeles growth projections.

State and regional planning programs and policies encourage and incentivize development near transit stations. Metro supports local jurisdictions in developing and adopting transit-supportive policies and programs to leverage the value of transit investments and increase ridership. The project would expand transit service in the region, which could facilitate development around station areas consistent with local policies and zoning requirements and restrictions. Any development that could result in the vicinity of the proposed stations would be consistent with local polices and requirements and with local growth

projections as set forth in the SCAG 2020 RTP/SCS and would be subject to a separate environmental review and approval process. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.5.7.1.5 MAINTENANCE AND STORAGE FACILITY

3.5.7.1.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the proposed MSF would result in new temporary employment opportunities; however, most workers would likely come from the existing large labor pool within the greater Los Angeles region, who would not need to relocate to the RSA. As a result, growth projections identified in the 2020 RTP/SCS would not be exceeded. Therefore, the MSF would have a less than significant impact during construction.

3.5.7.1.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the MSF would not result in substantial changes to the existing population in the MSF RSA. Operation of the MSF would not include development of new housing or businesses that would directly induce population growth. Unlike the stations, implementation of the MSF would not indirectly affect growth and development in the RSA because the MSF would not provide transit connections and thus not encourage growth and economic development in surrounding communities. Although, operation of the MSF would create new jobs for maintaining and servicing the light rail transit vehicles, increases in employment within the MSF RSA is consistent with the 2020 RTP/SCS plan and growth projections. Operation of the MSF would not induce unplanned population growth, either directly or indirectly. Therefore, the MSF would have a less than significant impact during operation.

3.5.7.2 IMPACT CMN-2: POPULATION AND HOUSING DISPLACEMENT

Impact CMN-2: Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

3.5.7.2.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.5.7.2.1.1 CONSTRUCTION IMPACTS

No Impact. Construction of the KNE San Vicente–Fairfax Alignment would not require acquisition of residential parcels, nor would it displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during construction.

3.5.7.2.1.2 OPERATIONAL IMPACTS

No Impact. Operation of the KNE San Vicente–Fairfax Alignment would not require acquisition of residential parcels. It would not displace substantial numbers of existing people or housing, nor necessitate construction of replacement housing elsewhere. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during operation.

3.5.7.2.2 KNE FAIRFAX ALIGNMENT

3.5.7.2.2.1 CONSTRUCTION IMPACTS

No Impact. Construction of the KNE Fairfax Alignment would not require acquisition of residential parcels, nor would it displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. Therefore, the KNE Fairfax Alignment would have no impact during construction.

3.5.7.2.2.2 OPERATIONAL IMPACTS

No Impact. Operation of the KNE Fairfax Alignment would not require acquisition of residential parcels. It would not displace substantial numbers of existing people or housing, nor necessitate construction of replacement housing elsewhere. Therefore, the KNE Fairfax Alignment would have no impact during operation.

3.5.7.2.3 KNE LA BREA ALIGNMENT

3.5.7.2.3.1 CONSTRUCTION IMPACTS

No Impact. Construction of the KNE La Brea Alignment would not require acquisition of residential parcels, nor would it displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. Therefore, the KNE La Brea Alignment would have no impact during construction.

3.5.7.2.3.2 OPERATIONAL IMPACTS

No Impact. Operation of the KNE La Brea Alignment would not require acquisition of residential parcels. It would not displace substantial numbers of existing people or housing, nor necessitate construction of replacement housing elsewhere. Therefore, the KNE La Brea Alignment would have no impact during operation.

3.5.7.2.4 HOLLYWOOD BOWL DESIGN OPTION

3.5.7.2.4.1 CONSTRUCTION IMPACTS

No Impact. Construction of the Hollywood Bowl Design Option would not require acquisition of residential parcels. It would not displace substantial numbers of existing people or housing, nor necessitate construction of replacement housing elsewhere. Therefore, the Hollywood Bowl Design Option would have no impact during construction.

3.5.7.2.4.2 OPERATIONAL IMPACTS

No Impact. Operation of the Hollywood Bowl Design Option would not require acquisition of residential parcels. It would not displace substantial numbers of existing people or housing, nor necessitate construction of replacement housing elsewhere. Therefore, the Hollywood Bowl Design Option would have no impact during operation.

3.5.7.2.5 MAINTENANCE AND STORAGE FACILITY

3.5.7.2.5.1 CONSTRUCTION IMPACTS

No Impact. Construction of the proposed MSF would not require acquisition of residential parcels. Construction activities would not displace substantial numbers of existing people or housing, nor necessitate construction of replacement housing elsewhere. Therefore, the MSF would have no impact during construction.

3.5.7.2.5.2 OPERATIONAL IMPACTS

No Impact. Operation of the MSF would not require acquisition of residential parcels. It would not displace substantial numbers of existing people or housing, nor necessitate construction of replacement housing elsewhere. Therefore, the MSF would have no impact during operation.

3.5.7.3 MITIGATION MEASURES

As the impact analysis above demonstrates, construction and operation of any of the KNE alignments and stations, the design option, and the MSF would result in either no impact or a less than significant impact related to communities, population, and housing. Therefore, no mitigation is required under CEQA.

3.5.7.4 SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

Table 3.5-23 summarizes the communities, population, and housing impact significance conclusions and applicable mitigation measures. As indicated above, there are no significant communities, population, and housing impacts that would require mitigation.

TABLE 3.5-23. KNE SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

IMPACT		IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES				
		KNE SAN VICENTE–FAIRFAX ALIGNMENT	KNE FAIRFAX ALIGNMENT	KNE LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MAINTENANCE AND STORAGE FACILITY
Impact CMN-1: Unplanned Population Growth	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
Impact CMN-2: Population and Housing Displacement	Impact Before Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact

Source: Connect Los Angeles Partners 2023
LTS = less than significant

3.6 CULTURAL AND PALEONTOLOGICAL RESOURCES

3.6.1 CULTURAL RESOURCES INTRODUCTION

This discussion provides an evaluation of K Line Northern Extension (KNE) as it relates to cultural resources, specifically historical resources, archaeological resources, and human remains. It includes descriptions of the federal, state, and local regulatory setting, existing conditions, and the impacts from construction and operation of the proposed alignments and stations, design option, and the maintenance and storage facility (MSF), as well as mitigation measures where applicable. For more detailed information, refer to the KNE Cultural and Paleontological Resources Technical Report (Appendix 3.6-A).

See Sections 3.6.8 through Section 3.6.14 for the analysis of paleontological resources.

3.6.2 REGULATORY FRAMEWORK

3.6.2.1 FEDERAL

The following federal laws and regulations are relevant to construction and operations of the project:

- National Historic Preservation Act (54 United States Code 300101 et seq.)
- National Register of Historic Places (NRHP) (36 Code of Federal Regulations [CFR] 60)

3.6.2.2 STATE

The following state laws and regulations are relevant to construction and operation of the project:

- California Environmental Quality Act (CEQA) (California Public Resources Code [PRC] Sections 21000 et seq.)
- California Register of Historical Resources (CRHR)
- California PRC:
  - Sections 5020–5029.5
  - Sections 5079–5079.65
  - Sections 5097.9–5097.991
  - Section 21083.2(g)
  - 21083.2(b) and 21083.2(c)
- Health and Safety Code Sections 7052 and 7050.5
- California Native American Historical, Cultural, and Sacred Sites Act

3.6.2.3 REGIONAL

No regional regulations are applicable to the project regarding cultural resources.

3.6.2.4 LOCAL

The following local regulations are relevant to construction and operation of the project:

- Los Angeles County Historic Preservation Ordinance
- Los Angeles County, Administrative Code, Division 22, Chapter 9, Article 1 (Ordinance No. 178402)
- City of Los Angeles, Municipal Code, Chapter I, Article 2, Section 12.20.3 (Ordinance No. 175891)
- City of Los Angeles, General Plan, Conservation Element

3.6.3 METHODOLOGY

3.6.3.1 CEQA METHODOLOGY

The purpose of this analysis is to evaluate the project against CEQA thresholds of significance as the basis for determining the level of impacts related to cultural resources. The methodology used to assess potential impacts on cultural resources, specifically historical resources, archaeological resources, and human remains, included delineation of the resource study area (RSA); consultation with various interested parties; and identification of cultural resources through archival research and a targeted field survey.

3.6.3.2 SIGNIFICANCE THRESHOLDS

In accordance with Appendix G of the 2022 CEQA Guidelines, the project would have a significant impact related to cultural resources if it would:

- Impact CUL-1: Cause a substantial adverse change in the significance of a historical resource pursuant to California Code of Regulations (CCR) Section 15064.5.
- Impact CUL-2: Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to CCR Section 15064.
- Impact CUL-3: Disturb any human remains, including those interred outside of dedicated cemeteries.

3.6.4 RESOURCE STUDY AREA

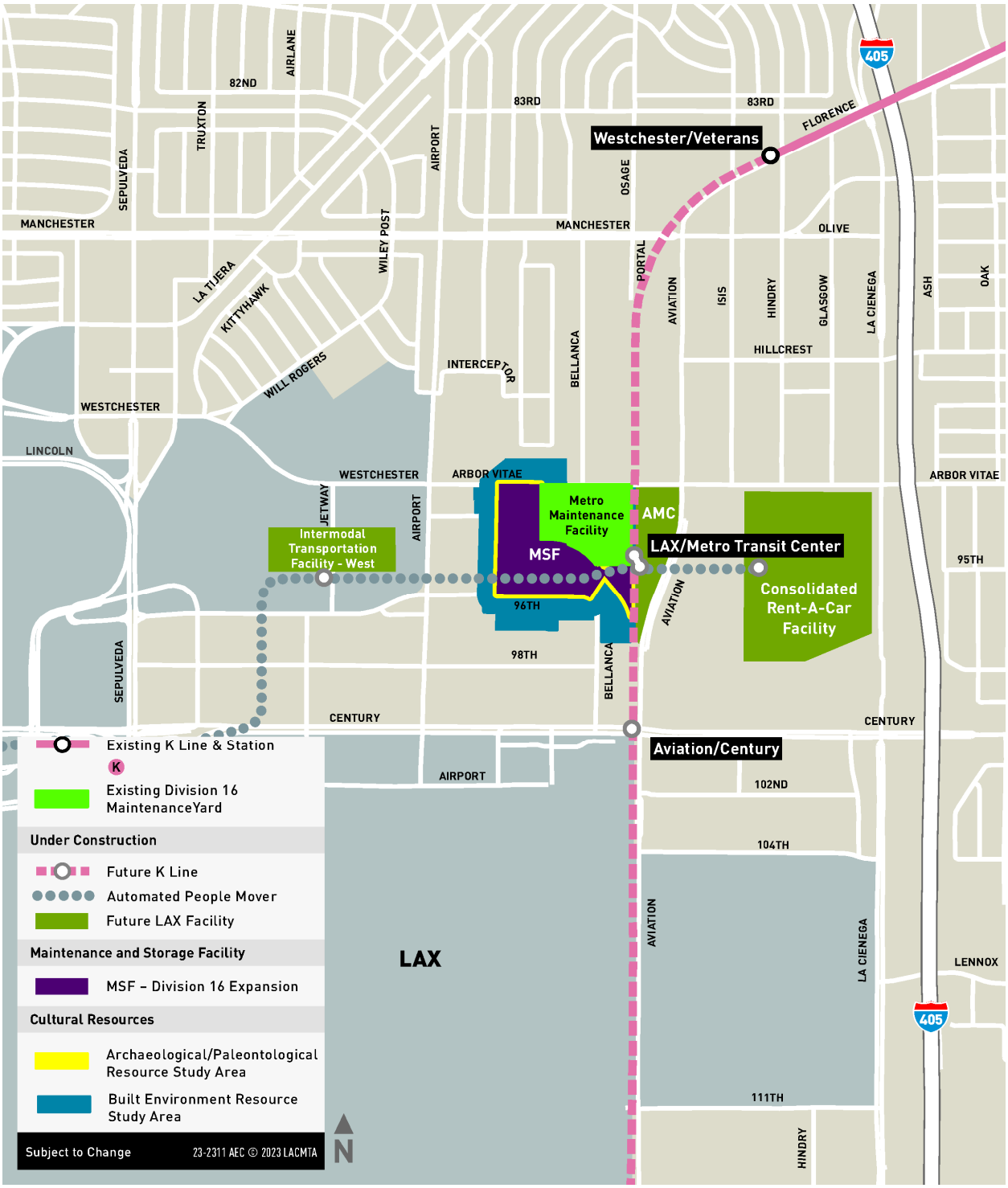
The built environment RSA for cultural resources is defined as the area necessary to construct, operate, and maintain the alignments and stations, the design option, and the MSF. The RSA includes all right-of-way (ROW) required for the project, including public parcels and private properties planned for permanent site improvements, such as stations and maintenance yards, as well as construction areas and tunnel boring machine (TBM) launch sites. Where new infrastructure is constructed or would require aboveground elements, the built environment RSA includes the entirety of any parcel that the alignment would completely or partially cross or buildings adjacent to the alignment footprint within a reasonable viewshed of the new construction (i.e., the introduction of new infrastructure would have the potential to cause new visual, audible, or atmospheric intrusions on the setting of adjacent cultural resources). For built environment resources, property acquisitions and adjacent areas where the project has the potential to indirectly impact historic resources are also included. Due to the underground nature of most of the project (with the exception of the MSF), the built environment RSA within the underground alignments was exempted for built environment resources because no construction impacts or permanent visual impacts to these resources would occur. Typically, the built environment RSA extends out from the alignment approximately 50 feet, or from one to three parcels, depending on parcel sizes, intervening landscape elements, and buildings, and whether the historic land use is sensitive to the proposed change in setting.

The archaeological RSA encompasses areas where temporary or permanent ground disturbance may occur and includes all proposed ROW, acquisition, and construction areas. An overview of both the archaeological and built environment RSAs is provided on Figure 3.6-1. Figure 3.6-2 shows the MSF RSA.

FIGURE 3.6-1. KNE ALIGNMENTS, STATIONS, AND HOLLYWOOD BOWL DESIGN OPTION RESOURCE STUDY AREAS

Source: Connect Los Angeles Partners 2024

FIGURE 3.6-2. MSF RESOURCE STUDY AREA



Source: Connect Los Angeles Partners 2024

3.6.5 EXISTING SETTING

This existing setting discussion summarizes current conditions related to cultural resources within and near the KNE RSA.

3.6.5.1 REGIONAL SETTING

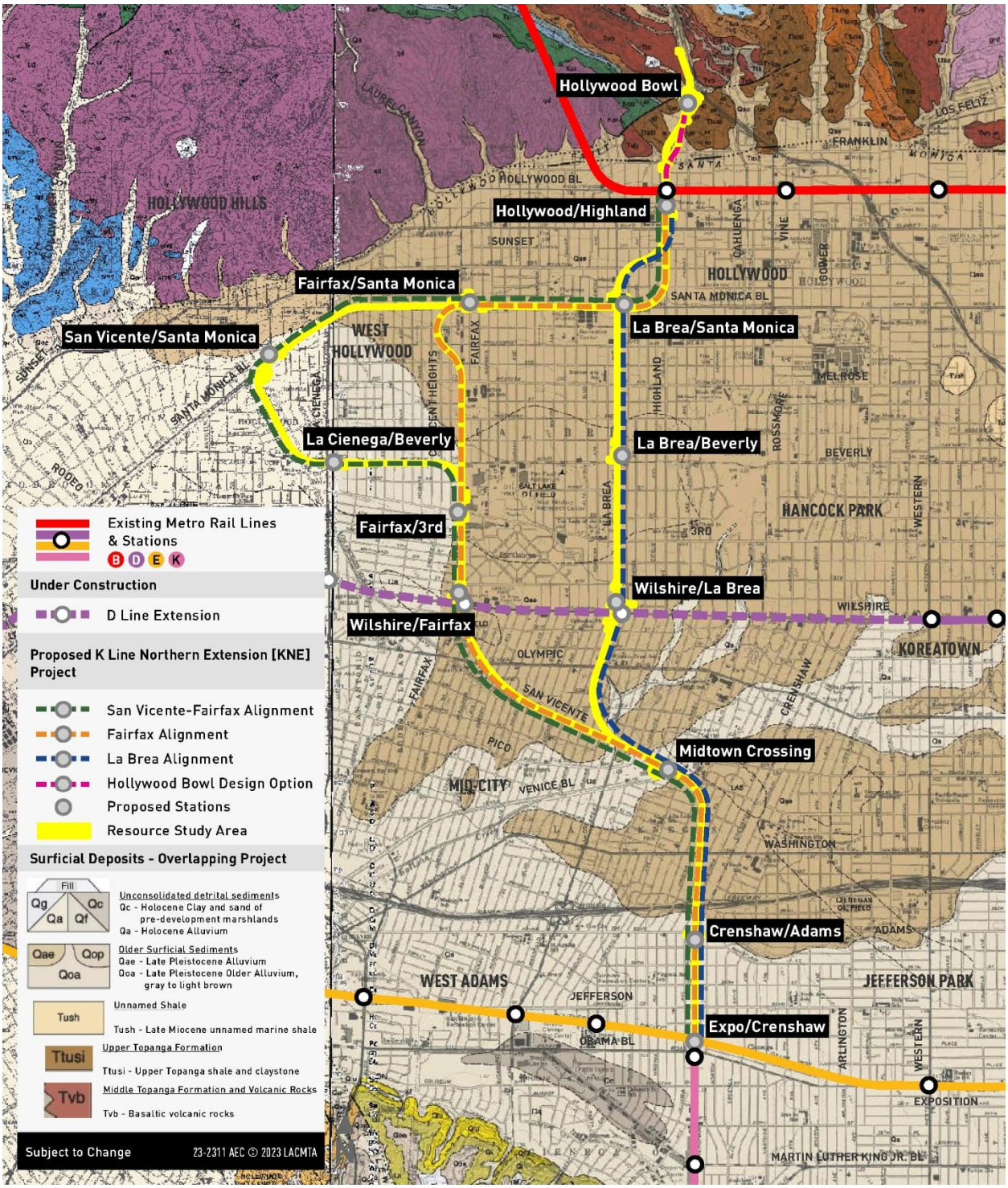
KNE is located in a relatively flat area of the Los Angeles Basin. The basin is bounded by the Santa Monica Mountains to the northwest, the San Gabriel Mountains to the north, and the San Bernardino and San Jacinto Mountains to the east. The basin was formed by alluvial and fluvial deposits derived from these surrounding mountains. Today, the vicinity of KNE is a densely populated and heavily developed city landscape.

3.6.5.1.1.1 GEOLOGIC SETTING

Geologic mapping indicates that most of the surface in the vicinity of KNE is covered with Pleistocene-aged (11,700 before present [BP] to 2.58 million years [Ma]) alluvium, alluvial fan, and valley deposits (mapped as Qae in Figure 3.6-3 and Figure 3.6-4). A smaller portion of the project is covered by Holocene-aged (less than 11,700 BP) alluvium mapped as Qa. Outcrops of the Topanga Formation cross the northern tip of the RSA.

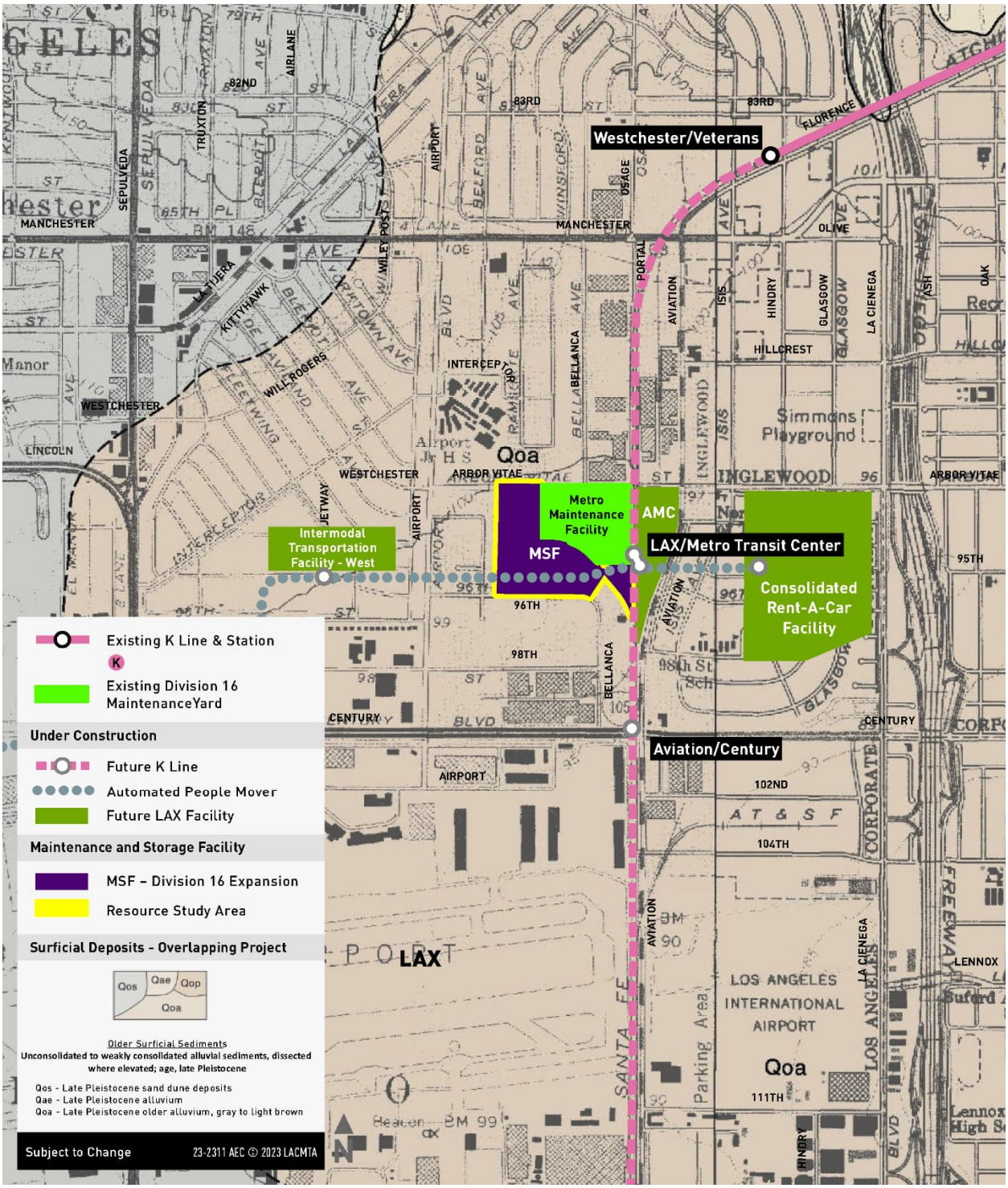
Any cultural deposits that are or may have been present within the RSA would likely have been located on or near the surface within younger alluvium (Qa) deposits. These recent alluvial deposits are common throughout the northern half of the RSA and are characterized by deposits of gravel and sand that form active parts of alluvial valleys.

FIGURE 3.6-3. SURFICIAL DEPOSITS IN VICINITY OF THE KNE ALIGNMENTS



Source: Dibblee and Ehrenspeck 1991a and 1991b; Connect Los Angeles Partners 2024

FIGURE 3.6-4. SURFICIAL DEPOSITS IN THE VICINITY OF THE MSF



Source: Dibblee and Minch 2007; Connect Los Angeles Partners 2024

3.6.5.1.1.2 PREHISTORIC CONTEXT

The prehistory of the Southern California coastal region is typically divided into Early (9,000 to 3,000 BP), Middle (2,550 to 800 BP), and Late Period (800 to 400 BP), with an initial Paleo-Indian period dating to the late Pleistocene and early Holocene (13,000 to 10,000 BP) (Wallace 1955; Warren 1968).

PALEO-INDIAN PERIOD (13,000 TO 10,000 BP)

The limited contextualized evidence of Paleo-Indian hunting technology and the more recent identification of early sites along the Pacific coast indicate that the earliest people to colonize California likely arrived along the shores and settled into these rich coastal environments (Erlandson et al. 2007:53; Willis and Des Lauriers 2011). In the Southern California coastal region, the earliest evidence of human occupation comes from a handful of sites with early tools and some human remains that have been dated from 7,000 to around 13,000 years old (Erlandson 2012:21).

EARLY PERIOD (9000 TO 3000 BP)

Although people are known to have inhabited what is now Southern California beginning at least 13,000 years BP (Arnold et al. 2004), the first solid evidence of human occupation in the Los Angeles Basin dates to roughly 9000 BP and is associated with a period known as the Early Period or the Millingstone Horizon (Wallace 1955; Warren 1968). Sites from this time period typically contain shell middens, large numbers of milling implements, crude core and cobble tools, flaked stone tools, distinctive cogged stone implements, and infrequent side-notched dart points (Fenenga 1953).

MIDDLE PERIOD (2500 TO 800 BP)

Although many aspects of Early Period culture persisted, by 3000 BP, a number of socioeconomic changes occurred (Erlandson 1994; Wallace 1955; Warren 1968). These changes are associated with the period known as the Middle Period or Intermediate Horizon (Wallace 1955). The mortar and pestle were introduced during this period, suggesting an increased reliance on hard plant foods such as acorns (Altschul and Grenda 2002). Increasing population size coincides with intensified exploitation of terrestrial and marine resources (Erlandson 1994).

LATE PERIOD (800 TO 400 BP)

The Late Prehistoric period, spanning from approximately 800 years ago to the Spanish Mission era, is the period associated with the florescence of contemporary Native American groups. The Late Period is notable for a dramatic increase in the number of habitation and food processing sites. These sites include more bone tools, numerous types of Olivella shell beads, circular fishhooks, and occasional pottery vessels (Miller 1991). Between 800 and 200 years BP, small arrow-sized projectile points, of the Desert side-notched and Cottonwood triangular series, were adopted along what is now the Southern California coast (Altschul and Grenda 2002). Following European contact, glass trade beads and metal items also appeared in the archaeological record. Burial practices shifted to cremation in what is now the Los Angeles Basin and northern Orange County. However, at many coastal and most Channel Island sites, interment remained the common practice (Moratto 1984).

At the time of European contact, the general project vicinity was occupied by Shoshonean-speaking Gabrieliño people who controlled what is now the Los Angeles Basin and Orange County down to Aliso Creek (Kroeber 1925). The northern San Fernando Valley was the northernmost extent of the territory occupied by people who the Spanish referred to as the Fernadeño, a name derived from nearby Mission San Fernando. The Fernadeño were culturally identical to the Gabrieliño. The Tataviam and Chumash, of the Hokan Chumashan language family, lived to the north and west of this territory (Bean and Smith 1978; Shipley 1978).

3.6.5.1.1.3 HISTORIC CONTEXT

The historical era in California began with Spanish colonization and is often divided into three distinctive chronological and historical periods: the Spanish or Mission Period (1542 to 1821), the Mexican or Rancho Period (1821 to 1848), and the American Period (1848 to present). The history of Los Angeles is characterized by population influx and diversity, as well as infrastructural and architectural developments.

3.6.5.1.2 INVENTORY RESULTS

This discussion identifies the results of identification efforts for cultural resources.

3.6.5.1.2.1 INTERESTED PARTY CONSULTATION

Metro has sought information, as appropriate, from three government agencies (the City of West Hollywood Planning and Development Services, the Historic Landmarks and Records Commission of Los Angeles County, and the Los Angeles County Department of Regional Planning) and 32 organizations (i.e., historical societies, museums, libraries, and preservation organizations) likely to have knowledge of or concerns about cultural resources in the RSA and vicinity to identify issues related to potential impacts on historical and archaeological resources.

Letters were sent to interested parties on October 4, 2023, describing the RSA and the United States Geological Survey (USGS) topographic maps of the alignments. No responses have been received to date.

3.6.5.1.2.2 ARCHIVAL RESEARCH

Archaeologists, historians, and architectural historians who meet the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61) and are familiar with resources and research considerations within the vicinity of KNE conducted the archival research for this study.

SOUTH CENTRAL COASTAL INFORMATION CENTER RECORDS SEARCH

A records search for the project was conducted at the South Central Coastal Information Center (SCCIC) of the California Historical Resources Information System, California State University, Fullerton on January 13, 18, and 19, and February 22, 2023. The SCCIC, an affiliate of the Office of Historic Preservation (OHP), is the official state repository of cultural resources records and studies for Los Angeles County. The search included a review of all previously recorded prehistoric archaeological, historic archaeological, and built environment resources and previous cultural resource reports on file within a 0.25-mile radius of the RSA. In addition, the California Points of Historical Interest, the California Historical Landmarks, the CRHR, the

NRHP, the California State Historic Resources Inventory, and local registers were reviewed. Historical USGS quadrangle maps were also reviewed.

The SCCIC records search identified 134 previously recorded resources within 0.25-mile radius of the RSA. Of the 134 resources (128 built environment, five archaeological, and one multi-component resource), 61 resources intersect the built environment RSA, 36 of which intersect the archaeological RSA. Table 3.6-1 provides the number of resources that overlap with the alignments, design option, and MSF.

TABLE 3.6-1. SCCIC PREVIOUSLY RECORDED RESOURCES WITHIN THE KNE BUILT ENVIRONMENT RSA

PROJECT COMPONENT	BUILT ENVIRONMENT RESOURCES	ARCHAEOLOGICAL RESOURCES	TOTAL
KNE San Vicente–Fairfax Alignment	42	2	44
KNE Fairfax Alignment	39	2	42
KNE La Brea Alignment	35	1	36
Hollywood Bowl Design Option	8	0	8
MSF	0	0	0

Source: SCCIC 2023
Note: Although there are 61 resources in the RSA, several resources overlap in the alignments and the design option; therefore, the resources identified in this table for all of the project components are more than 61.
KNE = K Line Northern Extension; MSF = maintenance and storage facility; RSA = resource study area; SCCIC = South Central Coastal Information Center

The SCCIC records search identified 128 built environment resources and one multi-component (built environment and archaeological) resource within a 0.25-mile radius of the RSA, of which 61 intersect the built environment RSA. Of these 61 built environment resources, 29 were identified as eligible and/or listed as historical resources on the CRHR. Built environment resources range from historic districts, such as the Whitley Heights Historic District, Miracle Mile Historic District, and Hollywood Boulevard Commercial and Entertainment District, to commercial buildings, such as the Zephyr Club, Rexall Drug Store, Lee Drug Co., and Johnie's Coffee Shop. Other building types include civic resources, such as the Hollywood High School Auditorium, the West Hollywood Library, and the Cahuenga Pass Transportation Center, to residential resources, such as the Samuel Freeman House, the Highland-Camrose Bungalow Village, and the De Keyser Residence. Many of these resources overlap with multiple alignments and the design option.

Additionally, the SCCIC records search identified six archaeological sites within the 0.25-mile radius of the archaeological RSA (Table 3.6-2). Two historic archaeological sites (P-19-003045 and P-19-003302) are within the archaeological RSA; one historic archaeological site (P-19-002964) is within the built environment RSA but outside the archaeological RSA; and one prehistoric archaeological site (P-19-000159) and two historic archaeological sites (P-19-001261 and P-19-002393) are outside both RSAs.

TABLE 3.6-2. SCCIC PREVIOUSLY RECORDED ARCHAEOLOGICAL RESOURCES

PRIMARY NUMBER (P-19-)	RESOURCE NAME/ DESCRIPTION	CONSTRUCTION DATE/TIME PERIOD	ELIGIBILITY/ EVALUATION STATUS FOR CRHR/NRHP	LOCATION
000159	La Brea Tar Pits – prehistoric archaeological materials and human remains	Prehistoric	Unevaluated	0.25-mile buffer
001261	La Brea Tar Pits – historic-age refuse in historic mining pit	Late 19th to early 20th Century	Unevaluated	0.25-mile buffer
002393	Historic-age refuse in redwood-lined privy or well	1902-1911	Unevaluated	0.25-mile buffer
002964	Historic-age trash deposit and brick-lined structure	1901-1950	Unevaluated	Built Environment RSA; KNE La Brea Alignment
003045	Gilmore Adobe and associated archaeological deposits	1852	Locally Significant	Archaeological RSA; KNE La Brea Alignment
003302	Historic-age trash deposit	Unknown	Unevaluated	Archaeological RSA; all KNE Alignments; Destroyed

Source: SCCIC 2023
CRHR = California Register of Historical Resources; NRHP = National Register of Historic Places; RSA = resource study area; SCCIC = South Central Coastal Information Center

BUILT ENVIRONMENT RESOURCE DIRECTORY

In addition to information from the SCCIC, archival research included a review of the Built Environment Resources Directory (BERD). The BERD is an inventory of built environment resources maintained by the OHP and contains many built resources that are not indicated on the SCCIC's maps. The BERD search identified 209 resources within the built environment RSA, many of which overlap multiple alignments and the design option, as summarized in Table 3.6-3.

TABLE 3.6-3. BERD RESOURCES WITHIN THE KNE BUILT ENVIRONMENT RSA

PROJECT COMPONENT	NUMBER OF BERD RESOURCES*
KNE San Vicente–Fairfax Alignment	174
KNE Fairfax Alignment	159
KNE La Brea Alignment	101
Hollywood Bowl Design Option	21
MSF	0

Source: BERD 2023
Note: Although there are 209 BERD resources in the RSA, multiple BERD resources overlap in the alignments and the design option; therefore, the resources identified in this table for all of the project components are more than 209.
BERD = Built Environment Resources Directory; KNE = K Line Northern Extension; MSF = maintenance and storage facility; RSA = resource study area

CITY OF LOS ANGELES HISTORIC RESOURCES INVENTORY

A search of the Los Angeles Historic Resources Inventory (HistoricPlacesLA) was also conducted. HistoricPlacesLA contains information on Los Angeles Historic-Cultural Monuments (LAHCMs), Historic Preservation Overlay Zones (HPOZs), and properties identified as eligible for listing in the NRHP or CRHR, or as an LAHCM or a HPOZ through the Los Angeles Historic Resources Survey, known as SurveyLA. The HistoricPlacesLA search identified five HPOZs partially within the built environment RSA: Carthay Circle HPOZ, La Fayette Square HPOZ, Miracle Mile HPOZ, Miracle Mile North HPOZ, and Whitley Heights HPOZ. A review of SurveyLA identified two additional historical resources: the Park La Brea Garden Apartments and the Firestone Tire Building. Table 3.6-4 summarizes these results by alignment and design option. No HPOZs were identified within the MSF RSA.

TABLE 3.6-4. HISTORIC PRESERVATION OVERLAY ZONES WITHIN THE KNE BUILT ENVIRONMENT RSA

HPOZ NAME	SAN VICENTE–FAIRFAX ALIGNMENT	FAIRFAX ALIGNMENT	LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION
Carthay Circle HPOZ	X	X		
La Fayette Square HPOZ	X	X	X	
Miracle Mile HPOZ	X	X	X	
Miracle Mile North HPOZ			X	
Whitley Heights HPOZ				X
TOTAL OVERLAY ZONES	**3**	**3**	**3**	**1**

Source: HistoricPlacesLA 2023
HPOZ = Historic Preservation Overlay Zones; KNE = K Line Northern Extension; RSA = resource study area

In addition, the HistoricPlacesLA search identified 18 listed LAHCMs within the built environment RSA. Table 3.6-5 summarizes these results by alignment and design option. No LAHCMs were identified within the MSF RSA.

TABLE 3.6-5. LOS ANGELES HISTORIC-CULTURAL MONUMENTS WITHIN THE KNE BUILT ENVIRONMENT RSA

LAHCM NUMBER	ADDRESS	DESCRIPTION	SAN VICENTE–FAIRFAX ALIGNMENT	FAIRFAX ALIGNMENT	LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION
475	1920-1928 North Highland Avenue	Highland Towers Apartments				X
248	6817 Franklin Avenue	First United Methodist Church of Hollywood	X	X	X	
291	2103-2115 1/2 North Highland Avenue	Highland - Camrose Bungalow Village				X
231	817-823 North Hayworth Avenue	El Greco Apartments		X		

LAHCM NUMBER	ADDRESS	DESCRIPTION	SAN VICENTE–FAIRFAX ALIGNMENT	FAIRFAX ALIGNMENT	LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION
667	344-346 North Fairfax Avenue	The Leader Building rooftop neon sign		X		
1248	7901-7909 West Beverly Boulevard	Fairfax Theater		X		
1045	6101 West Wilshire Boulevard	Johnie's Coffee Shop	X	X		
566	6067 Wilshire Boulevard	May Company Wilshire	X	X		
543	6333 West 3rd Street	Original Farmers Market	X	X		
1167	7800-7860 West Beverly Boulevard	CBS Television City	X	X		
813	5207-5209 Wilshire Boulevard	Security-First National Bank			X	
1020	800 South La Brea Avenue	Firestone Tire Building			X	
451	5370 Wilshire Boulevard	Darkroom (façade only)			X	
Pending	5401 Wilshire Boulevard	Sontag Drug Store			X	
439	450-458 South Detroit Street	Apartments			X	
194	Hollywood Boulevard (between Gower and La Brea) and Vine Street (between Sunset and Yucca)	Hollywood Walk of Fame	X	X	X	
593	1666 North Highland Avenue	Max Factor Makeup Salon	X	X	X	
495	6834-6838 Hollywood Boulevard	El Capitan Theater	X	X	X	
TOTAL LAHCM			**8**	**11**	**9**	**2**

Source: HistoricPlacesLA 2023
KNE = K Line Northern Extension; LAHCM = Los Angeles Historic-Cultural Monument; RSA = resource study area

NATIVE AMERICAN HERITAGE COMMISSION SACRED LANDS FILE SEARCH

A Sacred Lands File (SLF) search was conducted by the Native American Heritage Commission (NAHC) on January 19, 2023, to identify any Native American cultural resources that may be Traditional Cultural Properties or tribal cultural resources and that might be affected by the project, as required by CEQA as amended by Assembly Bill (AB) 52.

The results of the SLF search indicate that the region contains Native American cultural resources, Traditional Cultural Properties, and/or tribal cultural resources. The NAHC also identified 10 Native American representatives for AB 52 consultation efforts and recommended contacting the Fernandeño Tataviam Band of Mission Indians and the Gabrieleño/Tongva San Gabriel Band of Mission Indians for additional information. A summary of AB 52 consultation is included in Section 3.17, Tribal Cultural Resources.

3.6.5.1.2.3 FIELD SURVEY

A targeted field survey was conducted on March 8 and 17, 2023, by a qualified architectural historian and archaeologist (36 CFR Part 61) to identify cultural resources in the RSA.

BUILT ENVIRONMENT RESOURCES

Due to the primarily underground nature of the project, the built environment survey focused on proposed station locations, TBM launch and retrieval sites, and construction staging areas with aboveground project components. The built environment survey was undertaken to identify architectural resources, which include the man-made features that comprise the recognizable built environment. This typically includes extant aboveground buildings and structures that date from the earliest territorial settlements until the present day.

To capture all potential historical resources through the duration of the project, the built environment component of the survey included all resources that would be at least 45 years old at project construction, which is estimated to begin in 2041. Therefore, all resources that were or appeared to be constructed by 1996 were included in the survey. Building construction dates were identified using Los Angeles County Tax Assessor information and verified in field and desktop surveys. All significant built environment resources newly identified during the survey were formally recorded on Department of Parks and Recreation (DPR) series 523 forms. DPR updates on previously recorded properties were also prepared as needed if previous documentation was inadequate or the resource had been substantially altered. Properties that were identified as ineligible resources were exempted from evaluation.

As a result of the pedestrian surveys, 16 previously documented built environment resources were updated and 50 new built environment resources were recorded.

ARCHAEOLOGICAL RESOURCES

The archaeological component of the field survey included accessible areas of exposed ground surface along the KNE footprint. Because a majority of the RSA is developed, prior to the survey a desktop review of the RSA was conducted to identify potential areas with exposed ground surface that could be inspected for evidence of material culture. Satellite imagery was used to map undeveloped lots and landscaped areas along roads, sidewalks, and other public areas in the RSA that could be examined for traces of archaeological resources.

No new or previously documented archaeological resources were observed during the survey.

3.6.5.1.3 SIGNIFICANT RESOURCES WITHIN THE RSA

This discussion summarizes resources identified within the RSAs that meet CEQA significance thresholds for cultural resources.

3.6.5.1.3.1 BUILT ENVIRONMENT RESOURCES

The cultural resources study identified 64 built environment resources within the built environment RSAs that qualify as historical resources for the purposes of CEQA, including one with an archaeological component. A total of 45 historical resources are located within the KNE San Vicente–Fairfax Alignment RSA, 42 within the KNE Fairfax Alignment RSA, 28 within the KNE La Brea Alignment RSA, and 10 within the Hollywood Bowl Design Option RSA. Many of these resources overlap with multiple alignments and the design option. Table 3.6-6 lists these resources and the alignment(s) that they overlap with. No historical resources have been identified within the MSF RSA.

TABLE 3.6-6. BUILT ENVIRONMENT HISTORICAL RESOURCES WITHIN THE KNE BUILT ENVIRONMENT RSA

MAP REFERENCE[1]	NAME	ADDRESS	SAN VICENTE–FAIRFAX ALIGNMENT	FAIRFAX ALIGNMENT	LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION
1	First United Methodist Church of Hollywood	6817 Franklin Ave	X	X	X	
2	Hollywood Wax Museum	6765 Hollywood Blvd	X	X	X	
3	Los Angeles First Federal, Security Pacific Bank	6777 Hollywood Blvd	X	X	X	
4	Sivananda Yoga Community	1538 McCadden Pl	X	X	X	
5	Hollywood High School Historic District	1521 N Highland Ave	X	X	X	
6	Hollywood High School Liberal Arts Building	1521 N Highland Ave	X	X	X	
7	6806 Hollywood Boulevard	6806 Hollywood Blvd	X	X	X	
8	Rexall Drug Store, Lee Drug Company	6800 Hollywood Blvd	X	X	X	
9	Max Factor Makeup Salon	1666 N Highland Ave	X	X	X	
10	Bank of America	6780 Hollywood Blvd	X	X	X	
11	Hollywood High School Auditorium	1521 N Highland Ave	X	X	X	

MAP REFERENCE[1]	NAME	ADDRESS	SAN VICENTE–FAIRFAX ALIGNMENT	FAIRFAX ALIGNMENT	LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION
12	Hollywood Walk of Fame	Hollywood Blvd and Vine St	X	X	X	
13	Hollywood Boulevard Commercial And Entertainment District	6200-7000 Hollywood Blvd; with adjacent parcels on N Vine St, N Highland Ave, and N Ivar S.	X	X	X	
14	1145 N Sycamore Avenue	1145 N. Sycamore Ave	X	X	X	
15	1143 N Sycamore Avenue	1143 N. Sycamore Ave	X	X	X	
16	1133 N Detroit Street	1133 N. Detroit St	X	X	X	
17	Formosa Café	7118 Santa Monica Blvd	X	X	X	
18	Lexington Avenue Single-Family Residences	6800-7000 Blocks of Lexington Ave	X	X	X	
19	Johnie's Coffee Shop	6101 Wilshire Blvd	X	X		
20	May Company Building	6067 Wilshire Blvd	X	X		
21	6132 Orange Street	6132 Orange St	X	X		
22	7900 Santa Monica Boulevard	7900 Santa Monica Blvd	X	X		
23	US Post Office (Fairfax Avenue)	1125 N Fairfax Ave	X	X		
24	Pacific Design Center	8687 Melrose Ave	X			
25	Commercial Building (7916-7922 Santa Monica Boulevard)	7916-7922 Santa Monica Blvd	X	X		
26	Campbell Building	7906-7914 Santa Monica Blvd	X	X		
27	7900-7904 Santa Monica Boulevard	7900-7904 Santa Monica Blvd	X	X		
28	Plummer Park and Oldest House in Hollywood	7377 Santa Monica Blvd	X	X		
29	United Artists/Samuel Goldwyn Studios	7200 Santa Monica Blvd	X	X		

MAP REFERENCE[1]	NAME	ADDRESS	SAN VICENTE–FAIRFAX ALIGNMENT	FAIRFAX ALIGNMENT	LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION
30	Santa Monica Boulevard Commercial Grouping	7900-7936 Santa Monica Blvd	X	X		
31	Santa Palm Car Wash	8787 Santa Monica Blvd	X			
32	8851 Santa Monica Boulevard	8851 Santa Monica Blvd	X			
33	8701 Santa Monica Boulevard	8701 Santa Monica Blvd	X			
34	8703 Santa Monica Boulevard	8703 Santa Monica Blvd	X			
35	Whitley Heights HPOZ	Multiple				X
36	Hollywood Bowl	2301 N. Highland Ave				X
37	Hollywood Bowl Pedestrian Tunnel	N/A				X
38	Lasky Demille Studio Barn	2100 N. Highland Ave				X
39	Highland-Cambrose Bungalow Village	2103-2115 1/2 N Highland Ave, 6814-6836 Alta Loma Terrace, and 6819 Camrose Ave				X
40	Palazzo Verde Apartments	2040 N Highland Ave				X
41	Valentino Apartments	2000 N Highland Ave				X
42	Roman Gardens	2000 N Highland Ave				X
43	El Greco Apartment	817 N Hayworth Ave		X		
44	Whitley Heights Historic District	Bounded by Franklin Ave on the South - Highland Ave on the West - Cahuenga Ave on the East - Converging to an apex on the North at Cahuenga Pass				X

MAP REFERENCE[1]	NAME	ADDRESS	SAN VICENTE–FAIRFAX ALIGNMENT	FAIRFAX ALIGNMENT	LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION
45	Samuel Freeman House	1962 Glencoe Way				X
46	West Boulevard Separator	West Blvd. over Venice Blvd	X	X	X	
47	Haig M. Prince/Fairfax Building	7901 Beverly Blvd		X		
48	Clem Wilson/ Mutual Of Omaha Building	5225 Wilshire Blvd			X	
49	Firestone Tire Building	800 S La Brea Ave			X	
50	Zephyr Club	5209 Wilshire Blvd			X	
51	5352-5354 Wilshire Boulevard	5352-5354 Wilshire Blvd			X	
52	330 N La Brea Ave, Los Angeles CA 90036	330 N La Brea			X	
53	453 S La Brea Ave, Los Angeles CA	453 S La Brea Ave			X	
54	571 S Fairfax Ave, Los Angeles CA	571 S Fairfax Ave	X	X		
55	575 S Fairfax Ave, Los Angeles CA	575 S Fairfax Ave	X	X		
56	6122 Orange St, Los Angeles CA 90048	6122 Orange St	X	X		
57	6148 Orange St, Los Angeles CA 90048	6148 Orange St	X	X		
58	6200 Wilshire Blvd, Los Angeles CA	6200 Wilshire Blvd	X	X		
59	357 N La Brea Ave, Los Angeles CA	357 N La Brea Ave			X	
60	Morris Memorial	4450 W. Adams Blvd	X	X	X	
61	7760 Santa Monica Boulevard	7760 Santa Monica Blvd	X	X		
62	Park La Brea Apartments	555 S Ogden Dr	X	X		

MAP REFERENCE[1]	NAME	ADDRESS	SAN VICENTE–FAIRFAX ALIGNMENT	FAIRFAX ALIGNMENT	LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION
63	Original Farmers Market[2]	6333 W 3rd St	X	X		
64	Hollywood Theater	6766 Hollywood Blvd	X	X	X	
		TOTAL PROPERTIES	**45**	**42**	**28**	**10**

Source: HistoricPlacesLA 2023; SCCIC 2023; BERD 2023
[1] Refer to Appendix 3.6-A, KNE Cultural and Paleontological Resources Technical Report, for maps showing the locations of the historical resources identified in this table.
[2] Contains archaeological component P-19-003045
KNE = K Line Northern Extension; RSA = resource study area

3.6.5.1.3.2 ARCHAEOLOGICAL RESOURCES

Two archaeological resources, P-19-003045 and P-19-003302, have been identified within the archaeological RSA. Archaeological deposits associated with these resources consist of historic-age refuse deposits encountered below ground surface in the course of construction activities. The resources were documented in the field and artifacts were collected prior to the destruction of observed archaeological components. Documents reviewed at the SCCIC do not indicate that either site has been evaluated to be determined a historical resource or a unique archaeological resource under CEQA. The following discussion addresses the CEQA status for previously documented archaeological resources in the archaeological RSA and the potential to encounter previously unidentified archaeological resources within the archaeological RSA during construction.

P-19-003045

P-19-003045 consists of the Gilmore Adobe and associated archaeological deposits. The Gilmore Adobe, also known as the La Brea Adobe, and Original Farmers Market has been determined to be a built environment historical resource under CEQA and is listed as LAHCM No. 543. The archaeological deposit for P-19-003045 consists primarily of dispersed historic-age trash scatters and limited subsurface utility features across a wide area surrounding the adobe and farmers market, which date to all phases of historic occupation of the site. The existing 2002 site record on file with the SCCIC does not evaluate the eligibility of the archaeological component of the site but it should be treated as a historical resource under CEQA based on the status of the associated structures. While no artifacts or features associated with this site appear to have been previously recorded within the archaeological RSA, the dispersed nature of the archaeological deposit recorded for this resource suggests there is potential to encounter portions of the site that have not been previously documented during construction.

P-19-003302

P-19-003302 consisted of a discrete, two-foot-diameter, trash pit of undetermined age that was completely removed as a result of archaeological monitoring of construction activities associated with Metro's Red Line Project (Avalos 2003). This resource has been destroyed and is not considered eligible for listing as a historical resource or a unique archaeological resource under CEQA.

3.6.5.1.3.3 ARCHAEOLOGICAL SENSITIVITY OF THE RSA

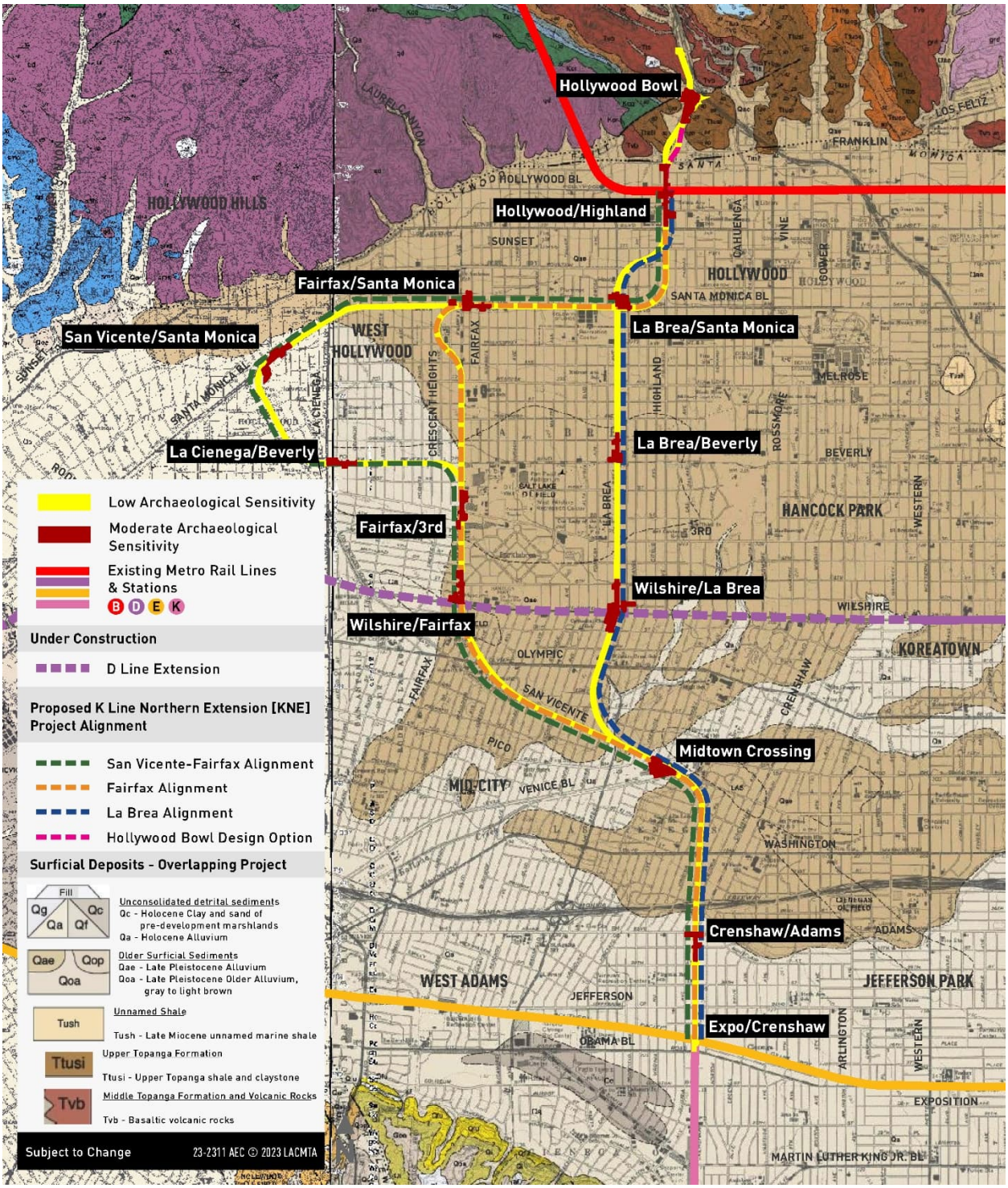
No archaeological resources were observed during the cultural field survey; however, a majority of the archaeological RSA is paved, and exposed surfaces available for inspection consisted primarily of landscape features, which are often small and contain heavily disturbed soils or imported fill.

Archival research indicates that a majority of archaeological deposits recorded within the RSAs and a 0.25-mile radius were encountered below ground surface during construction activities. Site records for archaeological resources identified at the SCCIC indicate the potential exists for project-related construction activities to encounter historic-age refuse and archaeological features within the first five feet below ground surface underlying existing developments, with some features extending much farther below surface.

While no prehistoric archaeological resources have been identified within the archaeological RSA, one prehistoric resource, the La Brea Tar Pits (P-19-000159), is located within 0.25 mile of the RSAs. Most of the archaeological RSA is in an alluvial depositional environment. Geologic mapping indicates that the majority of the archaeological RSA is situated on late Holocene to middle Pleistocene-aged alluvial fan and landslide deposits. The young age of the Holocene soils indicates that the sediments that they formed on were deposited in the last 5,000 years and, therefore, have a moderate potential for burial of older archaeological deposits. Generally, the younger a surficial alluvial landform is, the higher its potential for preservation of buried archaeological deposits. People are known to have inhabited the region beginning at least 13,000 years ago, indicating soils from the late Pleistocene through the late Holocene have the potential to contain archaeological resources. Older Pleistocene soils present at depth in the archaeological RSA are not likely to contain archaeological resources. In addition, it has been demonstrated that archaeological sites are not distributed randomly across the landscape, but tend to correlate with certain environmental factors, including slope (flatter being more positively correlated) and distance to water and other resources.

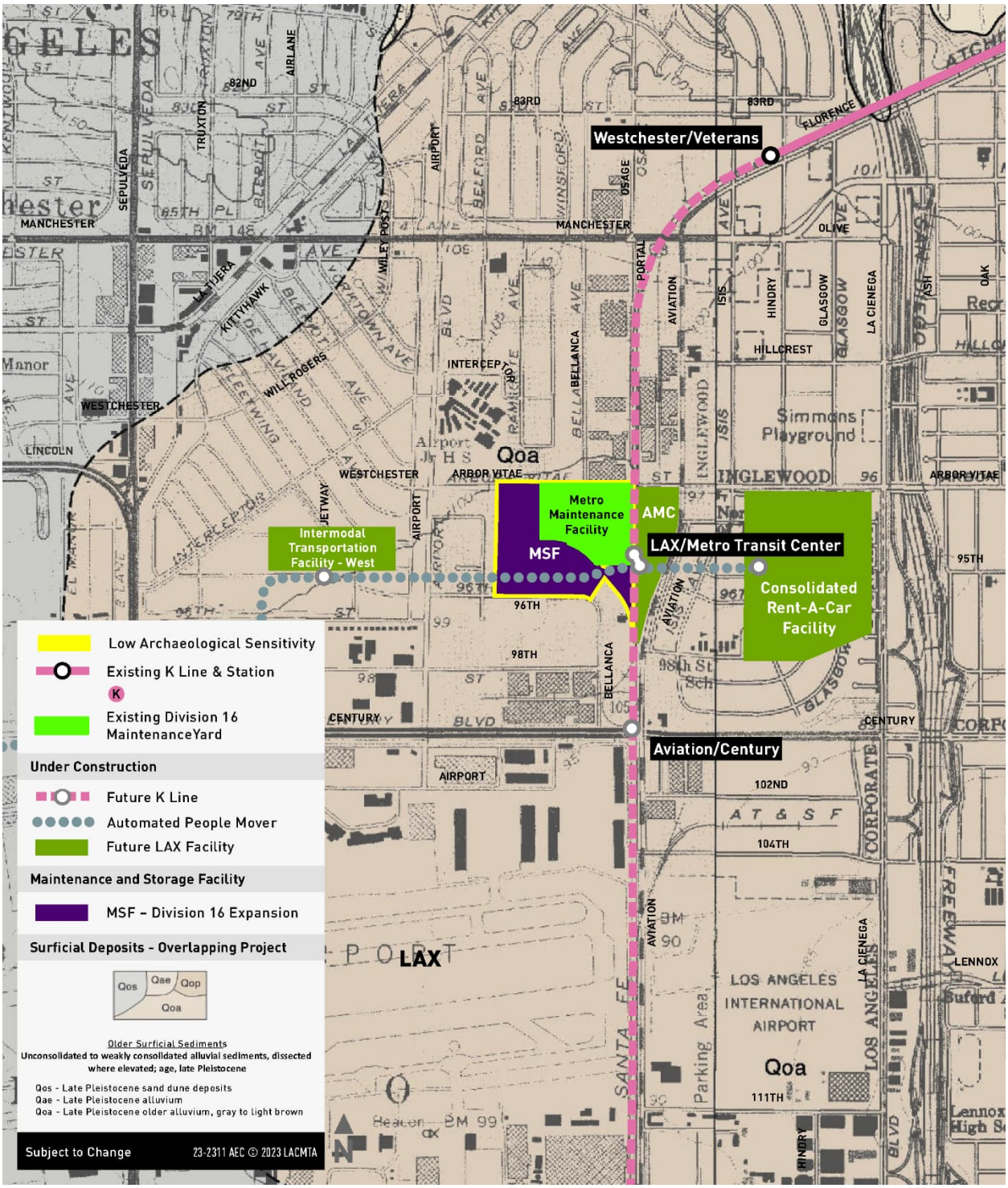
The archaeological sensitivity of the archaeological RSA is considered to range from low to moderate (Figure 3.6-5 and Figure 3.6-6). The degree and depth of previous ground disturbance across the archaeological RSA is not known, but a majority of the archaeological RSA has been subject to prior construction and development. Areas with low potential for archaeological resources include older geologic deposits, such as project components to be constructed at great depth or near surface components in areas with older surficial deposits, and areas with high levels of previous subsurface ground disturbance. Areas with moderate potential to encounter archaeological resources include portions of KNE with limited previous ground disturbance in younger alluvial soils and areas in proximity to previously recorded archaeological resources in or near the archaeological RSA.

FIGURE 3.6-5. ARCHAEOLOGICAL SENSITIVITY IN THE VICINITY OF KNE ALIGNMENTS AND STATIONS



Source: Dibblee and Ehrenspeck 1991a and 1991b; Connect Los Angeles Partners 2024

FIGURE 3.6-6. ARCHAEOLOGICAL SENSITIVITY IN THE VICINITY OF THE MSF



Source: Dibblee and Minch 2007; Connect Los Angeles Partners 2024

While the exact depth and degree of previous subsurface ground disturbance for the archaeological RSA is not known, grading for roads, rails, and parking lots, and construction of utilities and building foundations found across KNE are likely to have had impacts reaching depths of five feet below ground surface or more. It is anticipated that the degree of ground disturbance required to construct shallow project components, such as those proposed at the MSF, is consistent with the level of previous shallow ground disturbance expected to be present in the area. Work anticipated to be shallow and predominantly located in previously disturbed soils, such as for the MSF, have low potential to encounter intact buried archaeological deposits that may constitute a unique archaeological resource or significant archaeological historic resource. Tunnel construction is estimated to occur 50 to 70 feet below surface in older geological deposits, which have low sensitivity for archaeological deposits.

Other proposed construction activities, such as mass excavation required for the new stations and TBM launch and extraction sites, could encounter deeper, intact archaeological deposits in the RSA, and are considered to have moderate archaeological sensitivity. Project components with proximity to P-19-003045 and P-19-000159, including the important asphaltum source at the La Brea Tar Pits, contribute to the sensitivity of station and TBM launch and extraction locations in the vicinity of the resources.

3.6.5.1.3.4 HUMAN REMAINS

This analysis, consisting of an SCCIC records search, additional archival research, and archaeological field survey, did not identify any human remains within any of the RSAs for any of the alignments and stations, the design option, or the MSF. One archaeological site with remains from a single individual (P-19-000159) was identified approximately 0.23 mile from the nearest project component. No human remains were identified in the RSA.

3.6.6 PROJECT MEASURES

Project measures are design features, best management practices, or other commitments that Metro would implement as part of all proposed alignments, the design option, and the MSF to reduce or avoid environmental effects associated with project construction and operation. Project measures are not the same as mitigation measures, which are used to reduce an environmental impact's significance level. Where applicable, project measures are also discussed in Section 3.6.7 as part of the evaluation of environmental impacts.

There are no project measures specific to cultural resources that have been identified.

3.6.7 IMPACT EVALUATION AND MITIGATION MEASURES

This analysis presents the construction and operational impacts for cultural resources, as well as any applicable mitigation measures associated with KNE. A summary of the impact conclusions and applicable mitigation measures is found in Table 3.6-11 in Section 3.6.7.5.

3.6.7.1 IMPACT CUL-1: HISTORICAL RESOURCES

Impact CUL-1: Would the project cause a substantial adverse change in the significance of a historical resource pursuant to CCR Section 15064.5?

3.6.7.1.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.6.7.1.1.1 CONSTRUCTION IMPACTS

Significant Impact. Construction activities related to the KNE San Vicente–Fairfax Alignment would include property acquisitions, demolition of existing structures, and new construction of permanent project features. Potential impacts to historical resources would be related to the construction of new infrastructure that would require their immediate surroundings to be demolished or altered.

Significant impacts would occur to 25 of the 45 historical resources within the built environment RSA (Table 3.6-7). Of the 25 historical resources, five would be acquired and demolished, as shown in the table. With the exception of the five historical resources that would be demolished as part of the project, there would be no permanent visual impacts to historical resources or their setting. The remaining 20 historical resources with significant impacts would not have permanent visual impacts related to construction activities. However, construction of the stations, use of TBM launch and extraction sites, and use of construction staging areas could cause vibrations and ground settlement that could affect these adjacent historical resources. Additionally, the Original Farmers Market/Rancho La Brea Adobe contains a subsurface archaeological component that could be physically affected by construction activities, which would result in a significant impact. (Impacts to the archaeological component of this resource are discussed under Impact CUL-2 in Section 3.6.7.2.1). Table 3.6-7 indicates the specific design components of the alignment that would be associated with identified significant impacts to each of the 25 historical resources within the built environment RSA.

TABLE 3.6-7. KNE SAN VICENTE–FAIRFAX ALIGNMENT SIGNIFICANT IMPACTS

MAP ID[1]	RESOURCE NAME	ADDRESS	PRIMARY NO. (P-)	CONSTRUCTION DATE	DESIGN COMPONENT	IMPACT
1	First United Methodist Church of Hollywood	6817 Franklin Ave, Los Angeles, CA	19-169321	1928	Staging Area/TBM extraction site at Franklin Avenue and Highland Avenue	Construction Vibration and Ground Settlement
2	Hollywood Wax Museum	6765 Hollywood Blvd, Los Angeles, CA	19-167577	1928	Hollywood/Highland Station	Construction Vibration
3	Los Angeles First Federal, Security Pacific Bank	6777 Hollywood Blvd, Los Angeles, CA	19-167578	1927	Hollywood/Highland Station	Construction Vibration
4	Sivananda Yoga Community	1538 McCadden Ln, Los Angeles, CA	19-168032	1922	Staging area at the southeast corner of Highland Ave and Selma Ave	Construction Vibration
5	Hollywood High School Historic District	1521 N. Highland Ave, Los Angeles, CA	19-189990	1904-1956	Staging area at the southeast corner of Highland Ave and Selma Ave	Construction Vibration

MAP ID[1]	RESOURCE NAME	ADDRESS	PRIMARY NO. (P-)	CONSTRUCTION DATE	DESIGN COMPONENT	IMPACT
6	Hollywood High School Liberal Arts Building	1521 N. Highland Ave, Los Angeles, CA	N/A	1938	Staging area at the southeast corner of Highland Ave and Selma Ave	Construction Vibration
7	6806 Hollywood Blvd	6806 Hollywood Blvd, Los Angeles, CA	19-168608	1922	Hollywood/Highland Station Entrance Option 1 SW; Entrance Option 2 SE	Demolition
8	Rexall Drug Store, Lee Drug Company	6800 Hollywood Blvd, Los Angeles, CA	19-167580	1935	Hollywood/Highland Station Entrance Option 1 SW; Entrance Option 2 SE	Demolition
9	Max Factor Makeup Salon	1666 N. Highland Ave, Los Angeles, CA	19-167596	1931	Hollywood/Highland Station	Construction Vibration
10	Bank of America	6780 Hollywood Blvd, Los Angeles, CA	19-167579	1933; 1936	Hollywood/Highland Station Entrance Option 2 SE	Demolition
11	Hollywood High School Auditorium	1521 N Highland Ave, Los Angeles, CA	19-171030	1954	Staging area at the southeast corner of Highland Ave and Selma Ave	Construction Vibration
12	Hollywood Walk of Fame	Hollywood Blvd and Vine St, Los Angeles, CA	19-167544	1958	Hollywood/Highland Station	Construction Vibration
13	Hollywood Boulevard Commercial and Entertainment District	6200-7000 Hollywood Blvd; with adjacent parcels on N Vine St, N Highland Ave, and N Ivar St, Los Angeles, CA	19-174178	1915-1939	Hollywood/Highland Station	Construction Vibration
14	1145 N Sycamore Ave	1145 N. Sycamore Ave, Los Angeles, CA	19-169143	1923	La Brea/Santa Monica Station	Construction Vibration
15	1143 N Sycamore Ave	1143 N. Sycamore Ave, Los Angeles, CA	19-169141	1925	La Brea/Santa Monica Station	Construction Vibration
16	1133 N Detroit St	1133 N. Detroit St, West Hollywood, CA	N/A	1962	La Brea/Santa Monica Station (TBM launch site)	Vibrations and Ground Settlement
19	Johnie's Coffee Shop	6101 Wilshire Blvd	19-189263	1956	Wilshire/Fairfax Station Staging Area	Construction Vibration
20	May Company Building	6067 Wilshire Blvd	19-173051	1939-1940	Wilshire/Fairfax Station Staging Area	Construction Vibration

MAP ID[1]	RESOURCE NAME	ADDRESS	PRIMARY NO. (P-)	CONSTRUCTION DATE	DESIGN COMPONENT	IMPACT
23	U.S. Post Office (Fairfax Avenue)	1125 N. Fairfax Ave, West Hollywood, CA	N/A	1947	Fairfax/Santa Monica Station	Construction Vibration
31	Santa Palm Car Wash	8787 Santa Monica Blvd, West Hollywood, CA	N/A	1964	San Vicente/Santa Monica Station (Construction Staging Area; Entrance Option 2 – North)	Demolition
32	8851 Santa Monica Boulevard	8851 Santa Monica Blvd, West Hollywood, CA	19-176829	1926; 1946	San Vicente/Santa Monica Station	Construction Vibration
60	Morris Memorial	4450 W. Adams Blvd, Los Angeles, CA	N/A	1930; 1940	Crenshaw/Adams Station	Construction Vibration
61	7760 Santa Monica Boulevard	7760 Santa Monica Blvd, West Hollywood, CA	N/A	1935	Fairfax/Santa Monica Station	Construction Vibration
63	Original Farmers Market and Rancho La Brea Adobe	6333 W. 3rd St, Los Angeles, CA	N/A	1935	Fairfax/3rd Station	Construction Vibration
64	Hollywood Theater	6766 Hollywood Blvd, Los Angeles, CA	19-167576	1914; 1935	Hollywood/ Highland Station Entrance Option 2 – SE	Demolition

Source: Connect Los Angeles Partners 2024
[1] Refer to Appendix 3.6-A, KNE Cultural and Paleontological Resources Technical Report, for maps showing the locations of the historical resources identified in this table.
N/A = not applicable; TBM = tunnel boring machine

Of the 25 properties listed in the table, physical demolition of the following five resources would materially impair their significance:

- 6806 Hollywood Boulevard
- Rexall Drug Store, Lee Drug Company (6800 Hollywood Boulevard)
- Bank of American (6780 Hollywood Boulevard)
- Hollywood Theater (6766 Hollywood Boulevard)
- Santa Palm Car Wash (8787 Santa Monica Boulevard)

No construction-related impact would occur to the remaining 20 historical resources within the built environment RSA because they are located either along the underground portions of the proposed alignment or at a considerable distance from a station, construction staging area, and TBM launch and extraction sites.

As described above, construction of the alignment would cause substantial adverse changes in the significance of a historical resource pursuant to CCR Section 15064.5. Therefore, the KNE San Vicente–Fairfax Alignment would have a significant impact during construction, and mitigation would be required.

3.6.7.1.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operational activities associated with the KNE San Vicente–Fairfax Alignment would be limited to operation and maintenance of the project. Potential impacts to historical resources would be related to visual, audible, or atmospheric effects resulting from operation and maintenance activities, as well as new pedestrian traffic at these locations. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.6.7.1.2 KNE FAIRFAX ALIGNMENT

3.6.7.1.2.1 CONSTRUCTION IMPACTS

Significant Impact. Construction activities related to the KNE Fairfax Alignment would include property acquisitions, demolition of existing structures, and new construction of permanent project features. Potential impacts to historical resources would be related to the construction of new infrastructure that would require historical resources and/or their immediate surroundings to be demolished or altered.

Significant impacts would occur to 23 of the 42 historical resources within the KNE Fairfax Alignment built environment RSA (Table 3.6-8). Of the 23 historical resources, four would be acquired and demolished, as shown in the table. With the exception of the four historical resources that would be demolished as part of the project, there would be no permanent visual impacts to historical resources or their setting. The remaining 19 historical resources with significant impacts would not have permanent visual impacts related to construction activities. However, construction of the stations, use of TBM launch and extraction sites, and use of construction staging areas has the potential to cause vibrations and ground settlement that could impact these adjacent historical resources. Additionally, the Original Farmers Market/Rancho La Brea Adobe contains a subsurface archaeological component that could be physically affected by construction activities, which would result in a significant impact. Impacts to the archaeological component of this resource are discussed under Impact CUL-2 in Section 3.6.7.2.2. Table 3.6-8 indicates the specific design components of the alignment that would be associated with identified significant impacts to the 23 historical resources within the built environment RSA.

TABLE 3.6-8. KNE FAIRFAX ALIGNMENT SIGNIFICANT IMPACTS

MAP ID[1]	RESOURCE NAME	ADDRESS	PRIMARY NO. (P-)	CONSTRUCTION DATE	DESIGN COMPONENT	IMPACT
1	First United Methodist Church of Hollywood	6817 Franklin Ave, Los Angeles, CA	19-169321	1928	Staging Area/TBM extraction site at Franklin Avenue and Highland Avenue	Construction Vibration and Ground Settlement
2	Hollywood Wax Museum	6765 Hollywood Blvd, Los Angeles, CA	19-167577	1928	Hollywood/Highland Station	Construction Vibration
3	Los Angeles First Federal, Security Pacific Bank	6777 Hollywood Blvd, Los Angeles, CA	19-167578	1927	Hollywood/Highland Station	Construction Vibration
4	Sivananda Yoga Community	1538 McCadden Ln, Los Angeles, CA	19-168032	1922	Staging area at the southeast corner of Highland Avenue and Selma Avenue	Construction Vibration
5	Hollywood High School Historic District	1521 N Highland Ave	19-189990	1904-1956	Staging area at the southeast corner of Highland Avenue and Selma Avenue	Construction Vibration
6	Hollywood High School Liberal Arts Building	1521 N Highland Ave, Los Angeles, CA	N/A	1938	Hollywood/Highland staging area at the southeast corner of Highland Avenue and Selma Avenue	Construction Vibration
7	6806 Hollywood Blvd	6806 Hollywood Blvd, Los Angeles, CA	19-168608	1922	Hollywood/ Highland Station Entrance Option 1 SW; Entrance Option 2 SE	Demolition
8	Rexall Drug Store, Lee Drug Company	6800 Hollywood Blvd, Los Angeles, CA	19-167580	1935	Hollywood/Highland Station Entrance Option 1 SW; Entrance Option 2 SE	Demolition
9	Max Factor Makeup Salon	1666 N Highland Ave, Los Angeles, CA	19-167596	1931	Hollywood/Highland Station	Construction Vibration
10	Bank of America	6780 Hollywood Blvd	19-167579	1933; 1936	Hollywood/Highland Station Entrance Option 2 SE	Demolition
11	Hollywood High School Auditorium	1521 N Highland Ave, Los Angeles, CA	19-171030	1954	Hollywood/Highland Staging Area at the southeast corner of Highland Avenue and Selma Avenue	Construction Vibration

MAP ID[1]	RESOURCE NAME	ADDRESS	PRIMARY NO. (P-)	CONSTRUCTION DATE	DESIGN COMPONENT	IMPACT
12	Hollywood Walk of Fame	Hollywood Blvd and Vine St, Los Angeles, CA	19-167544	1958	Hollywood/Highland Station	Construction Vibration
13	Hollywood Boulevard Commercial and Entertainment District	6200-7000 Hollywood Blvd, with adjacent parcels on N. Vine St, N Highland Ave., and N Ivar St, Los Angeles, CA	19-174178	1915-1939	Hollywood/Highland Station	Construction Vibration
14	1145 N Sycamore Ave	1145 N Sycamore Ave, Los Angeles, CA	19-169143	1923	La Brea/Santa Monica Station	Construction Vibration
15	1143 N Sycamore Ave	1143 N Sycamore Ave, Los Angeles, CA	19-169141	1925	La Brea/Santa Monica Station	Construction Vibration
16	1133 N Detroit St	1133 N Detroit St, West Hollywood, CA	N/A	1962	La Brea/Santa Monica Station (TBM Launch Site)	Construction Vibration and Ground Settlement
19	Johnie's Coffee Shop	6101 Wilshire Blvd	19-189262	1956	Wilshire/Fairfax Station Staging Area	Construction Vibration
20	May Company Building	6067 Wilshire Blvd	19-173051	1939-1940	Wilshire/Fairfax Station Staging Area	Construction Vibration
23	U.S. Post Office (Fairfax Avenue)	1125 N Fairfax Ave, West Hollywood, CA	N/A	1947	Fairfax/Santa Monica Station	Construction Vibration
60	Morris Memorial	4450 W Adams Blvd, Los Angeles, CA	N/A	1930; 1940	Crenshaw/Adams Station	Construction Vibration
61	7760 Santa Monica Boulevard	7760 Santa Monica Blvd, West Hollywood, CA	N/A	1935	Fairfax/Santa Monica Station	Construction Vibration
63	Farmers Market and Rancho La Brea Adobe	6333 W 3rd St, Los Angeles, CA	N/A	1935	Fairfax/3rd Station	Construction Vibration
64	Hollywood Theater	6766 Hollywood Blvd, Los Angeles, CA	19-167576	1914; 1935	Hollywood/Highland Station Entrance Option 2 SE	Demolition

Source: Connect Los Angeles Partners 2023
[1] Refer to Appendix 3.6-A, KNE Cultural and Paleontological Resources Technical Report, for maps showing the locations of the historical resources identified in this table.
N/A = not applicable; SE = southeast; TBM = tunnel boring machine

Of these 23 properties listed in the table, physical demolition of the following four resources would materially impair their significance:

- 6806 Hollywood Boulevard
- Rexall Drug Store, Lee Drug Company (6800 Hollywood Boulevard)
- Bank of American (6780 Hollywood Boulevard)
- Hollywood Theater (6766 Hollywood Boulevard)

No construction-related impact would occur to the remaining 19 historical resources within the built environment RSA because they are located either along the underground portions of the alignment or at a considerable distance from the station, construction staging area, and TBM launch and extraction sites.

As described above, the alignment would cause substantial adverse changes in the significance of a historical resource pursuant to CCR Section 15064.5. Therefore, the KNE Fairfax Alignment would have a significant impact during construction, and mitigation would be required.

3.6.7.1.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operational activities associated with the KNE Fairfax Alignment would be limited to operation and maintenance of the project. Potential impacts to historical resources would be related to visual, audible, or atmospheric effects resulting from operation and maintenance activities, as well as new pedestrian traffic at these locations. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.6.7.1.3 KNE LA BREA ALIGNMENT

3.6.7.1.3.1 CONSTRUCTION IMPACTS

Significant Impact. Construction activities related to the KNE La Brea Alignment would include property acquisitions, demolition of existing structures, and new construction of permanent project features. Potential impacts to historical resources would be related to the construction of new infrastructure that would require historical resources and/or their immediate surroundings to be demolished or altered.

Significant impacts would occur to 23 of the 28 historical resources within the KNE La Brea Alignment built environment RSA (Table 3.6-9). Of the 23 historical resources, four would be acquired and demolished, as shown in the table. With the exception of the four historical resources that would be demolished as part of the project, there would be no permanent visual impacts to historical resources or their setting. The remaining 19 historical resources with significant impacts would not have permanent visual impacts related to construction activities. However, construction of the stations, use of TBM launch and extraction sites, and use of construction staging areas has the potential to cause vibrations and ground settlement that could impact these adjacent historical resources. Table 3.6-9 indicates the specific design elements of the KNE La Brea Alignment that would be associated with the significant impacts to the 23 historical resources within the built environment RSA.

TABLE 3.6-9. KNE LA BREA ALIGNMENT SIGNIFICANT IMPACTS

MAP ID[1]	RESOURCE NAME	ADDRESS	PRIMARY NO. (P-)	CONSTRUCTION DATE	DESIGN COMPONENT	IMPACT
1	First United Methodist Church of Hollywood	6817 Franklin Ave, Los Angeles, CA	19-169321	1928	Hollywood/Highland staging area/TBM extraction site at Franklin Avenue and Highland Avenue	Construction Vibration and Ground Settlement
2	Hollywood Wax Museum	6765 Hollywood Blvd, Los Angeles, CA	19-167577	1928	Hollywood/Highland Station	Construction Vibration
3	Los Angeles First Federal, Security Pacific Bank	6777 Hollywood Blvd, Los Angeles, CA	19-167578	1927	Hollywood/Highland Station	Construction Vibration
4	Sivananda Yoga Community	1538 McCadden Ln, Los Angeles, CA	19-168032	1922	Hollywood/Highland staging area at the southeast corner of Highland Avenue and Selma Avenue	Construction Vibration
5	Hollywood High School Historic District	1521 N Highland Ave, Los Angeles, CA	19-189990	1904-1956	Hollywood/Highland staging area at the southeast corner of Highland Avenue and Selma Avenue	Construction Vibration
6	Hollywood High School Liberal Arts Building	1521 N Highland Ave, Los Angeles, CA	N/A	1938	Hollywood/Highland staging area at the southeast corner of Highland Avenue and Selma Avenue	Construction Vibration
7	6806 Hollywood Blvd	6806 Hollywood Blvd, Los Angeles, CA	19-168608	1922	Hollywood/Highland Station Entrance Option 1 SW; Entrance Option 2 SE	Demolition
8	Rexall Drug Store, Lee Drug Company	6800 Hollywood Blvd, Los Angeles, CA	19-167580	1935	Hollywood/Highland Station Entrance Option 1 SW; Entrance Option 2 SE	Demolition
9	Max Factor Makeup Salon	1666 N Highland Ave, Los Angeles, CA	19-167596	1931	Hollywood/Highland Station	Construction Vibration
10	Bank of America	6780 Hollywood Blvd	19-167579	1933; 1936	Hollywood/ Highland Station Entrance Option 2 SE	Demolition
11	Hollywood High School Auditorium	1521 N Highland Ave, Los Angeles, CA	19-171030	1954	Hollywood/Highland staging area at the southeast corner of Highland Avenue and Selma Avenue	Construction Vibration

MAP ID[1]	RESOURCE NAME	ADDRESS	PRIMARY NO. (P-)	CONSTRUCTION DATE	DESIGN COMPONENT	IMPACT
12	Hollywood Walk of Fame	Hollywood Blvd and Vine St, Los Angeles, CA	19-167544	1958	Hollywood/Highland Station	Construction Vibration
13	Hollywood Boulevard Commercial and Entertainment District	6200-7000 Hollywood Blvd, with adjacent parcels on N Vine St, N Highland Ave, and N Ivar St, Los Angeles, CA	19-174178	1915-1939	Hollywood/Highland Station	Construction Vibration
14	1145 N Sycamore Ave	1145 N Sycamore Ave	19-169143	1923	La Brea/Santa Monica Station	Construction Vibration
15	1143 N Sycamore Ave	1143 N Sycamore Ave, Los Angeles, CA	19-169141	1925	La Brea/Santa Monica Station	Construction Vibration
16	1133 N Detroit St	1133 N Detroit St, West Hollywood, CA	N/A	1962	La Brea/Santa Monica Station (TBM Launch Site)	Construction Vibration and Ground Settlement
48	Clem Wilson/ Mutual of Omaha Building	5225 Wilshire Blvd	19-173045	1930	Staging area at Wilshire Boulevard and La Brea Avenue	Construction Vibration
50	Zephyr Club	5209 Wilshire Blvd	19-170998	1929	Staging area at Wilshire Boulevard and La Brea Avenue	Construction Vibration
51	5352-5354 Wilshire Boulevard	5352-5354 Wilshire Blvd	19-175237	1937	Staging area at Wilshire Boulevard and La Brea Avenue	Construction Vibration
52	330 N La Brea Avenue	330 N La Brea Ave, Los Angeles, CA	N/A	1928	La Brea/Beverly Station	Construction Vibration
59	357 N La Brea Avenue	357 N. La Brea Ave, Los Angeles, CA	N/A	1930	La Brea/Beverly Station	Construction Vibration
60	Morris Memorial	4450 W Adams Blvd, Los Angeles, CA	N/A	1930; 1940	Crenshaw/Adams Station	Construction Vibration
64	Hollywood Theater	6766 Hollywood Blvd, Los Angeles, CA	19-167576	1914; 1935	Hollywood/Highland Station Entrance Option 2 SE	Demolition

Source: Connect Los Angeles Partners 2024
[1] Refer to Appendix 3.6-A, KNE Cultural and Paleontological Resources Technical Report, for maps showing the locations of the historical resources identified in this table.
N/A = not applicable; TBM = tunnel boring machine

Of the 23 properties listed in the table, physical demolition of the following four resources would materially impair their significance:

- 6806 Hollywood Boulevard
- Rexall Drug Store, Lee Drug Company (6800 Hollywood Boulevard)
- Bank of American (6780 Hollywood Boulevard)
- Hollywood Theater (6766 Hollywood Boulevard)

No construction-related impact would occur to the remaining five historical resources within the built environment RSA because they are located either along the underground portions of the alignment or at a considerable distance from the station, construction staging area, and TBM launch and extraction sites.

As described above, the alignment would cause substantial adverse changes in the significance of a historical resource pursuant to CCR Section 15064.5. Therefore, the KNE La Brea Alignment would have a significant impact during construction, and mitigation would be required.

3.6.7.1.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operational activities associated with the KNE La Brea Alignment would be limited to operation and maintenance of the project. Potential impacts to historical resources would be related to visual, audible, or atmospheric effects resulting from operation and maintenance activities, as well as new pedestrian traffic at these locations. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.6.7.1.4 HOLLYWOOD BOWL DESIGN OPTION

3.6.7.1.4.1 CONSTRUCTION IMPACTS

Significant Impact. Construction activities related to the Hollywood Bowl Design Option would include property acquisitions and new construction of permanent project features. Significant impacts would occur at two of the 10 historical resources within the Hollywood Bowl Design Option built environment RSA: the Hollywood Bowl Pedestrian Tunnel and the Lasky DeMille Studio Barn (Table 3.6-10). Neither of these resources would be physically demolished, destroyed, relocated, or altered. No permanent visual impacts on these historical resources or their setting are anticipated from the addition of the station or the underground alignment. However, construction of the station, use of the TBM extraction site, and use of construction staging areas could cause adjacent vibrations and ground settlement that could affect these historical resources. Therefore, the Hollywood Bowl Design Option would have a potentially significant impact during construction, and mitigation would be required.

TABLE 3.6-10. KNE HOLLYWOOD BOWL DESIGN OPTION SIGNIFICANT IMPACTS

MAP ID[1]	RESOURCE NAME	ADDRESS	PRIMARY NO. (P-)	CONSTRUCTION DATE	DESIGN COMPONENT	IMPACT
37	Hollywood Bowl Pedestrian Tunnel	N/A	N/A	1950	Hollywood Bowl Station (underground tunnel excavation)	Construction Vibration and Ground Settlement
38	Lasky DeMille Studio Barn	2100 N Highland Ave, Los Angeles, CA	19-166802	1927	Hollywood Bowl Station (station vent shaft and construction staging area)	Construction Vibration

Source: Connect Los Angeles Partners 2024
[1] Refer to Appendix 3.6-A, KNE Cultural and Paleontological Resources Technical Report, for maps showing the locations of the historical resources identified in this table.
KNE = K Line Northern Extension; N/A = not applicable

3.6.7.1.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operational activities associated with the Hollywood Bowl Design Option would be limited to operation and maintenance of the project. Potential impacts to historical resources would be related to visual, audible, or atmospheric effects resulting from operation and maintenance activities, as well as new pedestrian traffic at these locations. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.6.7.1.5 MAINTENANCE AND STORAGE FACILITY

3.6.7.1.5.1 CONSTRUCTION IMPACTS

No Impact. No built environment resources are located in the MSF built environment RSA that meet the NRHP/CRHR criteria for eligibility and are considered historical resources for the purposes of CEQA. Therefore, the MSF would have no impact during construction.

3.6.7.1.5.2 OPERATIONAL IMPACTS

No Impact. No built environment resources are located in the MSF built environment RSA that meet the NRHP/CRHR criteria for eligibility and are considered historical resources for the purposes of CEQA. Therefore, the MSF would have no impact during operation.

3.6.7.2 IMPACT CUL-2: ARCHAEOLOGICAL RESOURCES

Impact CUL-2: Would the project cause a substantial adverse change in the significance of a unique archaeological resource pursuant to CCR Section 15064?

3.6.7.2.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.6.7.2.1.1 CONSTRUCTION IMPACTS

Significant Impact. The archaeological sensitivity in the KNE San Vicente–Fairfax Alignment archaeological RSA ranges from low to moderate, which indicates construction activities associated with the alignment would have a low to moderate potential to encounter previously unidentified archaeological resources below ground surface. No unique archaeological resources eligible for listing in the CRHR or in a local register of historical resources were identified within the archaeological RSA; however, one historical resource (Original Farmers Market/Rancho La Brea Adobe) with an archaeological component (P-19-003045) was identified in the RSA. One archaeological resource (P-19-003302) that does not constitute a unique archaeological resource under CEQA was previously documented in the archaeological RSA for the alignment; however, the resource was completely removed during construction monitoring and does not require further treatment. Gabrieliño villages, burials, important prehistoric resource areas, and prehistoric and historic-age archaeological resources have been identified nearby (P-19-000159, P-19-001261, P-19-002393, and P-19-002964). In addition, the sediments present across the alignment consist of younger and older quaternary alluvium that have potential to contain archaeological deposits.

Locations considered to have low potential to encounter archaeological resources are those in older geologic deposits, such as project components to be constructed at great depth, and areas with high levels of previous subsurface ground disturbance. Locations considered to have moderate potential to encounter archaeological deposits are those in younger soils, such as project components constructed in shallower depths, and with low or unknown levels of previous disturbance. Proximity to previously recorded archaeological resources and water sources also increases sensitivity.

Additionally, Section 3.17, Tribal Cultural Resources, indicates that the region contains Native American cultural resources. Therefore, it is possible that unknown unique archaeological resources may be buried within the archaeological RSA.

Buried archaeological resources may exist within the archaeological RSA of the alignment, and it is possible these resources could be unearthed during ground-disturbing activities. The proposed alignment is largely within public ROW that has already been disturbed by utility and street construction, but these disturbances were relatively shallow. As a result, shallow construction work associated with the alignment would have lower potential to encounter intact archaeological resources due to these prior disturbances. Tunnel construction is estimated to occur 50 to 110 feet below the surface in older geological deposits that have low sensitivity for archaeological deposits. Other proposed construction activities, such as mass excavation required for the new stations and TBM launch and extraction sites, could encounter deeper, intact archaeological deposits in the archaeological RSA, and are considered to have moderate archaeological sensitivity. P-19-003045, the historic-age archaeological deposit with potential to extend into the archaeological RSA, and P-19-000159, the nearest prehistoric resource located over 300 meters from the archaeological RSA, contribute to the sensitivity of station and TBM launch and extraction locations in the vicinity of the resources.

Based on this analysis, construction of this alignment could cause a substantial adverse change in the significance of a unique archaeological resource listed or eligible for listing in the CRHR or in a local

register of historical resources. Therefore, the KNE San Vicente–Fairfax Alignment would have a potentially significant impact during construction, and mitigation would be required.

3.6.7.2.1.2 OPERATIONAL IMPACTS

No Impact. Operational activities associated with the KNE San Vicente–Fairfax Alignment would be limited to the operation and maintenance of the project and would not include further ground-disturbing activities. As a result, operation of the alignment would not cause a substantial adverse change in the significance of a unique archaeological resource. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during operation.

3.6.7.2.2 KNE FAIRFAX ALIGNMENT

3.6.7.2.2.1 CONSTRUCTION IMPACTS

Significant Impact. The archaeological sensitivity in the KNE Fairfax Alignment archaeological RSA ranges from low to moderate, which indicates construction activities associated with the alignment would have a low to moderate potential to encounter previously unidentified archaeological resources below the ground surface. No unique archaeological resources eligible for listing in the CRHR or in a local register of historical resources were identified within the archaeological RSA; however, one historical resource (Original Farmers Market/Rancho La Brea Adobe) with an archaeological component (P-19-003045) was identified in the RSA. One archaeological resource (P-19-003302) that does not constitute a unique archaeological resource under CEQA was previously documented in the archaeological RSA for the alignment; however, the resource was completely removed during construction monitoring and does not require further treatment. Gabrieliño villages, burials, important prehistoric resource areas, and prehistoric and historic-age archaeological resources have been identified nearby (P-19-000159, P-19-001261, P-19-002393, and P-19-002964). In addition, the sediments present across the alignment consist of younger and older quaternary alluvium that have potential to contain archaeological deposits.

Locations considered to have low potential to encounter archaeological resources are those in older geologic deposits, such as project components to be constructed at great depth, and areas with high levels of previous subsurface ground disturbance. Locations considered to have moderate potential to encounter archaeological deposits are those in younger soils, such as project components constructed in shallower depths, and with low or unknown levels of previous disturbance. Proximity to previously recorded archaeological resources and water sources also increases sensitivity.

Additionally, Section 3.17, Tribal Cultural Resources, indicates that the region contains Native American cultural resources. Therefore, it is possible that unknown unique archaeological resources may be buried within the archaeological RSA.

Buried archaeological resources may exist within the archaeological RSA of the alignment, and it is possible these resources could be unearthed during ground-disturbing activities. The proposed alignment is largely within public ROW that has already been disturbed by utility and street construction, but these disturbances were relatively shallow. As a result, shallow construction work associated with the alignment would have lower potential to encounter intact archaeological resources due to these prior disturbances.

Tunnel construction is estimated to occur 50 to 110 feet below the surface in older geological deposits that have low sensitivity for archaeological deposits. Other proposed construction activities, such as mass excavation required for the new stations and TBM launch and extraction sites, could encounter deeper, intact archaeological deposits in the archaeological RSA, and are considered to have moderate archaeological sensitivity. P-19-003045, the historic-age archaeological deposit with potential to extend into the archaeological RSA, and P-19-000159, the nearest prehistoric resource located over 300 meters from the archaeological RSA, contribute to the sensitivity of station and TBM launch and extraction locations in the vicinity of the resources.

Based on this analysis, construction of this alignment could cause a substantial adverse change in the significance of a unique archaeological resource listed or eligible for listing in the CRHR or in a local register of historical resources. Therefore, the KNE Fairfax Alignment would have a potentially significant impact during construction, and mitigation would be required.

3.6.7.2.2.2 OPERATIONAL IMPACTS

No Impact. Operational activities associated with the KNE Fairfax Alignment would be limited to the operation and maintenance of the project and would not include further ground-disturbing activities. As a result, operation of the alignment would not cause a substantial adverse change in the significance of a unique archaeological resource. Therefore, the KNE Fairfax Alignment would have no impact during operation.

3.6.7.2.3 KNE LA BREA ALIGNMENT

3.6.7.2.3.1 CONSTRUCTION IMPACTS

Significant Impact. The archaeological sensitivity in the KNE La Brea Alignment archaeological RSA ranges from low to moderate, which indicates construction activities associated with the alignment would have a low to moderate potential to encounter previously unidentified archaeological resources below the ground surface. No unique archaeological resources eligible for listing in the CRHR or in a local register of historical resources were identified within the archaeological RSA. One archaeological resource (P-19-003302) that does not constitute a unique archaeological resource under CEQA was previously documented in the archaeological RSA for the alignment; however, the resource was completely removed during construction monitoring and does not require further treatment. Gabrieliño villages, burials, important prehistoric resource areas, and prehistoric and historic-age archaeological resources have been identified nearby (P-19-000159, P-19-001261, P-19-002393, and P-19-002964). In addition, the sediments present across the alignment consist of younger and older quaternary alluvium that have potential to contain archaeological deposits.

Locations considered to have low potential to encounter archaeological resources are those in older geologic deposits, such as project components to be constructed at great depth, and areas with high levels of previous subsurface ground disturbance. Locations considered to have moderate potential to encounter archaeological deposits are those in younger soils, such as project components constructed in shallower depths, and with low or unknown levels of previous disturbance. Proximity to previously recorded archaeological resources and water sources also increases sensitivity.

Additionally, Section 3.17, Tribal Cultural Resources, indicates that the region contains Native American cultural resources. Therefore, it is possible that unknown unique archaeological resources may be buried within the archaeological RSA.

Buried archaeological resources may exist within the archaeological RSA of the alignment, and it is possible these resources could be unearthed during ground-disturbing activities. The proposed alignment is largely within public ROW that has already been disturbed by utility and street construction, but these disturbances were relatively shallow. As a result, shallow construction work associated with the alignment would have lower potential to encounter intact archaeological resources due to these prior disturbances. Tunnel construction is estimated to occur 50 to 110 feet below the surface in older geological deposits that have low sensitivity for archaeological deposits. Other proposed construction activities, such as mass excavation required for the new stations and TBM launch and extraction sites, could encounter deeper, intact archaeological deposits in the archaeological RSA, and are considered to have moderate archaeological sensitivity. P-19-000159, the nearest prehistoric resource, located over 900 meters from the archaeological RSA, contributes to the sensitivity of station and TBM launch and extraction locations in the vicinity of the resources.

Based on this analysis, construction of this alignment could cause a substantial adverse change in the significance of a unique archaeological resource listed or eligible for listing in the CRHR or in a local register of historical resources. Therefore, the KNE La Brea Alignment would have a potentially significant impact during construction, and mitigation would be required.

3.6.7.2.3.2 OPERATIONAL IMPACTS

No Impact. Operational activities associated with the KNE La Brea Alignment would be limited to the operation and maintenance of the project and would not include further ground-disturbing activities. As a result, operation of the alignment would not cause a substantial adverse change in the significance of a unique archaeological resource. Therefore, the KNE La Brea Alignment would have no impact during operation.

3.6.7.2.4 HOLLYWOOD BOWL DESIGN OPTION

3.6.7.2.4.1 CONSTRUCTION IMPACTS

Significant Impact. The archaeological sensitivity in the Hollywood Bowl Design Option archaeological RSA ranges from low to moderate, which indicates construction activities associated with the design option would have a low to moderate potential to encounter previously unidentified archaeological resources below the ground surface. No unique archaeological resources eligible for listing in the CRHR or in a local register of historical resources were identified within the archaeological RSA. One archaeological resource (P-19-003302) that does not constitute a unique archaeological resource under CEQA was previously documented in the archaeological RSA for the design option; however, the resource was completely removed during construction monitoring and does not require further treatment. Gabrieliño villages, burials, important prehistoric resource areas, and prehistoric and historic-age archaeological resources have been identified nearby (P-19-000159, P-19-001261, P-19-002393, and P-19-002964). In addition, the

sediments present across the RSA consist of younger and older quaternary alluvium that have potential to contain archaeological deposits.

Locations considered to have low potential to encounter archaeological resources are those in older geologic deposits, such as project components to be constructed at great depth, and areas with high levels of previous subsurface ground disturbance. Locations considered to have moderate potential to encounter archaeological deposits are those in younger soils, such as project components constructed in shallower depths, and with low or unknown levels of previous disturbance. Proximity to previously recorded archaeological resources and water sources also increases sensitivity.

Additionally, Section 3.17, Tribal Cultural Resources, indicates that the region contains Native American cultural resources. Therefore, it is possible that unknown unique archaeological resources may be buried within the archaeological RSA.

Buried archaeological resources may exist within the archaeological RSA of the design option, and it is possible these resources could be unearthed during ground-disturbing activities. The proposed design option is largely within public ROW that has already been disturbed by utility and street construction, but these disturbances were relatively shallow. As a result, shallow construction work associated with the design option would have lower potential to encounter intact archaeological resources due to these prior disturbances. Sequential excavation method (SEM) tunnel construction is estimated to occur 50 to 110 feet below the surface in older geological deposits that have low sensitivity for archaeological deposits. Other proposed construction activities, such as SEM construction required for the Hollywood Bowl Station and TBM extraction at the station, could encounter deeper, intact archaeological deposits in the archaeological RSA and are considered to have moderate archaeological sensitivity. P-19-000159, the nearest prehistoric resource located over 300 meters from the archaeological RSA, contributes to the sensitivity of station and TBM launch and extraction locations in the vicinity of the resources.

Based on this analysis, construction of the design option could cause a substantial adverse change in the significance of a unique archaeological resource listed or eligible for listing in the CRHR or in a local register of historical resources. Therefore, the Hollywood Bowl Design Option would have a potentially significant impact during construction, and mitigation would be required.

3.6.7.2.4.2 OPERATIONAL IMPACTS

No Impact. Operational activities associated with the Hollywood Bowl Design Option would be limited to the operation and maintenance of the project and would not include further ground-disturbing activities. As a result, operation of the design option would not cause a substantial adverse change in the significance of a unique archaeological resource. Therefore, the Hollywood Bowl Design Option would have no impact during operation.

3.6.7.2.5 MAINTENANCE AND STORAGE FACILITY

3.6.7.2.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The archaeological sensitivity in the MSF archaeological RSA is low, which indicates construction activities associated with the MSF would have a low potential to encounter previously unidentified archaeological resources below ground surface. No previously recorded prehistoric or historic-age archaeological sites have been identified within the archaeological RSA for the MSF based on data available at the SCCIC; however, Gabrieliño villages, burials, important prehistoric resource areas, and prehistoric and historic-age archaeological resources have been identified nearby. While the sediments present across the MSF site consist of older quaternary alluvium that has the potential to contain archaeological deposits, a review of satellite images and targeted field survey shows all portions of the MSF site have been subject to development for the construction of buildings, structures, parking lots, roads, and railways. The exact depth and degree of previous subsurface ground disturbances at the MSF site is not known, but grading for roads, rails, and parking lots, and construction of utilities and building foundations are likely to have had impacts reaching depths of approximately five feet below ground surface.

Light rail tracks and structures for storage and maintenance of light rail vehicles are proposed to be constructed on the selected MSF site. It is anticipated that the degree of ground disturbance required to construct project components is consistent with the level of previous shallow ground disturbance expected to be present in the area. Because work is anticipated to be shallow and predominantly located in previously disturbed soils, the MSF has low potential to encounter intact buried archaeological deposits that may constitute a unique archaeological resource or significant archaeological historic resource. While it is unlikely that ground-disturbing activities would encounter intact archaeological resources, the potential does exist that construction may encounter archaeological resources.

The region contains Native American cultural resources (see Section 3.17, Tribal Cultural Resources); therefore, it is possible that unknown unique archaeological resources may be buried within the MSF archaeological RSA.

Because the MSF archaeological RSA is almost entirely developed, the minimal and/or shallow construction work that would be required would be unlikely to encounter intact unique archaeological resources. Construction of the MSF has a low potential to cause a substantial adverse change in the significance of a unique archaeological resource. Therefore, the MSF would have a less than significant impact during construction.

3.6.7.2.5.2 OPERATIONAL IMPACTS

No Impact. Operational activities associated with the MSF would be limited to the operation and maintenance of the project and would not include further ground-disturbing activities. As a result, operation of the MSF would not cause a substantial adverse change in the significance of a unique archaeological resource. Therefore, the MSF would have no impact during operation.

3.6.7.3 IMPACT CUL-3: DISTURBANCE OF HUMAN REMAINS

Impact CUL-3: Would the project disturb any human remains, including those interred outside of formal cemeteries?

3.6.7.3.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.6.7.3.1.1 CONSTRUCTION IMPACTS

Significant Impact. There are no known cemeteries or archaeological sites including human remains within the KNE San Vicente–Fairfax Alignment archaeological RSA. However, unknown human burials may exist within the archaeological RSA, and it is possible these burials could be encountered during excavation activities. Therefore, construction of the alignment could cause a substantial adverse change to an unknown burial. Therefore, the KNE San Vicente–Fairfax Alignment would have a potentially significant impact during construction, and mitigation would be required.

3.6.7.3.1.2 OPERATIONAL IMPACTS

No Impact. Operational activities associated with the KNE San Vicente–Fairfax Alignment would be limited to the operation and maintenance of the project and would not include further ground-disturbing activities. As a result, operation of the alignment would not have the potential to disturb any human remains, including those interred outside of formal cemeteries. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during operation.

3.6.7.3.2 KNE FAIRFAX ALIGNMENT

3.6.7.3.2.1 CONSTRUCTION IMPACTS

Significant Impact. There are no known cemeteries or archaeological sites including human remains within the KNE Fairfax Alignment archaeological RSA. However, unknown human burials may exist within the archaeological RSA, and it is possible these burials could be encountered during excavation activities. As a result, construction of the alignment could cause a substantial adverse change to an unknown burial. Therefore, the KNE Fairfax Alignment would have a potentially significant impact during construction, and mitigation would be required.

3.6.7.3.2.2 OPERATIONAL IMPACTS

No Impact. Operational activities associated with the KNE Fairfax Alignment would be limited to the operation and maintenance of the project and would not include further ground-disturbing activities. As a result, operation of the alignment would not have the potential to disturb any human remains, including those interred outside of formal cemeteries. Therefore, the KNE Fairfax Alignment would have no impact during operation.

3.6.7.3.3 KNE LA BREA ALIGNMENT

3.6.7.3.3.1 CONSTRUCTION IMPACTS

Significant Impact. There are no known cemeteries or archaeological sites including human remains within the KNE La Brea Alignment archaeological RSA. However, unknown human burials may exist within the archaeological RSA, and it is possible these burials could be encountered during excavation activities for the tunnels and stations. As a result, construction of the alignment could cause a substantial adverse change to an unknown burial. Therefore, the KNE La Brea Alignment would have a potentially significant impact during construction, and mitigation would be required.

3.6.7.3.3.2 OPERATIONAL IMPACTS

No Impact. Operational activities associated with the KNE La Brea Alignment would be limited to the operation and maintenance of the project and would not include further ground-disturbing activities. As a result, operation of the alignment would not have the potential to disturb any human remains, including those interred outside of formal cemeteries. Therefore, the KNE La Brea Alignment would have no impact during operation.

3.6.7.3.4 HOLLYWOOD BOWL DESIGN OPTION

3.6.7.3.4.1 CONSTRUCTION IMPACTS

Significant Impact. There are no known cemeteries or archaeological sites including human remains within the archaeological RSA of the Hollywood Bowl Design Option. However, unknown human burials may exist within the archaeological RSA, and it is possible these burials could be encountered during excavation activities for the tunnels and station. As a result, construction of the design option could cause a substantial adverse change to an unknown burial. Therefore, the Hollywood Bowl Design Option would have a potentially significant impact during construction, and mitigation would be required.

3.6.7.3.4.2 OPERATIONAL IMPACTS

No Impact. Operational activities associated with the Hollywood Bowl Design Option would be limited to the operation and maintenance of the project and would not include further ground-disturbing activities. As a result, operation of the design option would not have the potential to disturb any human remains, including those interred outside of formal cemeteries. Therefore, the Hollywood Bowl Design Option would have no impact during operation.

3.6.7.3.5 MAINTENANCE AND STORAGE FACILITY

3.6.7.3.5.1 CONSTRUCTION IMPACTS

Significant Impact. There are no known cemeteries or archaeological sites including human remains within the archaeological RSA of the MSF. However, unknown human burials may exist within the archaeological RSA, and it is possible these burials could be encountered during project excavation activities. As a result, construction of the MSF could cause a substantial adverse change to an unknown

burial. Therefore, the MSF would have a potentially significant impact during construction, and mitigation would be required.

3.6.7.3.5.2 OPERATIONAL IMPACTS

No Impact. Operational activities associated with the MSF would be limited to the operation and maintenance of the project and would not include further ground-disturbing activities. As a result, operation of the MSF would not have the potential to disturb any human remains, including those interred outside of formal cemeteries. Therefore, the MSF would have no impact during operation.

3.6.7.4 MITIGATION MEASURES

The mitigation measures described below are provided to reduce significant cultural resources impacts. Section 3.6.7.4.10 discusses the impact significance after mitigation.

3.6.7.4.1 MM CUL-1: PROTECTION MEASURES – DIFFERENTIAL SETTLEMENT/VIBRATION/TBM SPECIFICATIONS

Metro shall conduct a pre-construction baseline survey, implement building protection measures, and conduct a post-construction survey of historical resources in relation to TBM launch and extraction, as well as cut-and-cover and SEM construction, as applicable, for underground construction adjacent to the historical resources listed below for each alignment and the Hollywood Bowl Design Option. Building protection measures shall be implemented in conjunction with project measure PM NOI-1 and mitigation measure MM NOI-1 (see Section 3.14, Noise and Vibration) and would be included in the Cultural Resources Monitoring and Mitigation Plan (CRMMP) described in MM CUL-5 below.

MM CUL-1 includes the following elements:

- Metro shall conduct a pre-construction survey to establish baseline pre-construction conditions and building category and to assess 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. These investigations shall inform the development of appropriate support mechanisms for cut-and-cover construction areas or areas that could experience differential settlement as a result of using a TBM in proximity to the historical resource. An architectural historian or historical architect who meets the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61) shall review final design documents prior to implementation of measures.
- Metro shall implement building protection measures such as underpinning, soil grouting, or other forms of ground improvement, and use lower-vibration equipment and/or construction techniques. If the historical resource has the potential to be affected by differential settlement caused by TBM construction, Metro shall require the use of an earth pressure balance or slurry shield TBM.
- In addition, as part of final design, geotechnical construction recommendations and instrumentation and monitoring plans would be developed by a qualified engineer. These recommendations would be documented in the geotechnical design reports and would be

incorporated in structural design and construction drawings, as required per the Metro Rail Design Criteria. Refer to the Section 3.8, Geology and Soils, for additional detail and evaluation.

- A post-construction survey shall also be undertaken to ensure that no significant impacts had occurred to historical resources. 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.

ALIGNMENTS AND STATIONS

For the KNE San Vicente–Fairfax Alignment, Fairfax Alignment, and La Brea Alignment, MM CUL-1 shall be implemented for the following two historical resources:

- First United Methodist Church of Hollywood (6817 Franklin Avenue)
- 1133 N Detroit Street

HOLLYWOOD BOWL DESIGN OPTION

For the Hollywood Bowl Design Option, MM CUL-1 shall be implemented for the following historical resource:

- Hollywood Bowl Pedestrian Tunnel

3.6.7.4.2 MM CUL-2: CONSTRUCTION VIBRATION PROTECTION MEASURES – HISTORICAL RESOURCES

Metro shall conduct a pre-construction baseline survey, implement building protection measures, and conduct a post-construction survey of the historical resources listed below for each alignment and the Hollywood Bowl Design Option in relation to construction staging and construction vibration and cut-and-cover activities adjacent to these historical resources. This mitigation measure includes the following elements:

- Metro shall conduct a pre-construction survey to establish baseline pre-construction conditions and to assess the potential for damage related to improvements adjacent to the historical resources listed below. An architectural historian or historical architect who meets the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61) shall review proposed protection measures.
- Metro shall implement building protection measures such as fencing or sensitive construction techniques based on final project design.
- Metro shall conduct a post-construction survey to ensure that no significant impacts had occurred to the historical resources. 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 measure.

These protection measures shall be included in the CRMMP (see MM CUL-5) for the relevant historical resources.

KNE SAN VICENTE–FAIRFAX ALIGNMENT

For the KNE San Vicente–Fairfax Alignment, MM CUL-2 shall be implemented for the following 20 historical resources:

- First United Methodist Church of Hollywood (6817 Franklin Avenue)
- Hollywood Wax Museum (6765 Hollywood Boulevard)
- Los Angeles First Federal, Security Pacific Bank (6777 Hollywood Boulevard)
- Sivananda Yoga Community (1538 McCadden Place)
- Hollywood High School Historic District (1521 N Highland Avenue)
- Hollywood High School Liberal Arts Building (1521 N Highland Avenue)
- Max Factor Makeup Salon (1666 N Highland Avenue)
- Hollywood High School Auditorium (1521 N Highland Avenue)
- Hollywood Walk of Fame
- Hollywood Boulevard Commercial and Entertainment District
- 1145 N Sycamore Avenue
- 1143 N Sycamore Avenue
- 1133 N Detroit Street
- Johnie's Coffee Shop (6101 Wilshire Boulevard)
- May Company Building (6067 Wilshire Boulevard)
- US Post Office (Fairfax Avenue) [1125 N Fairfax Avenue]
- 8851 Santa Monica Boulevard
- Morris Memorial
- 7760 Santa Monica Boulevard
- Original Farmers Market and Rancho La Brea Adobe

KNE FAIRFAX ALIGNMENT

For the KNE Fairfax Alignment, MM CUL-2 shall be implemented for the following 19 historical resources:

- First United Methodist Church of Hollywood (6817 Franklin Avenue)
- Hollywood Wax Museum (6765 Hollywood Boulevard)
- Los Angeles First Federal, Security Pacific Bank (6777 Hollywood Boulevard)
- Sivananda Yoga Community (1538 McCadden Place)
- Hollywood High School Historic District (1521 N Highland Avenue)
- Hollywood High School Liberal Arts Building (1521 N Highland Avenue)
- Max Factor Makeup Salon (1666 N Highland Avenue)
- Hollywood High School Auditorium (1521 N Highland Avenue)

- Hollywood Walk of Fame
- Hollywood Boulevard Commercial and Entertainment District
- 1145 N Sycamore Avenue
- 1143 N Sycamore Avenue
- 1133 N Detroit Street
- Johnie's Coffee Shop (6101 Wilshire Boulevard)
- May Company Building (6067 Wilshire Boulevard)
- US Post Office (Fairfax Avenue) [1125 N Fairfax Avenue]
- Morris Memorial
- 7760 Santa Monica Boulevard
- Original Farmers Market and Rancho La Brea Adobe

KNE LA BREA ALIGNMENT

For the KNE La Brea Alignment, MM CUL-2 shall be implemented for the following 19 historical resources:

- First United Methodist Church of Hollywood (6817 Franklin Avenue)
- Hollywood Wax Museum (6765 Hollywood Boulevard)
- Los Angeles First Federal, Security Pacific Bank (6777 Hollywood Boulevard)
- Sivananda Yoga Community (1538 McCadden Place)
- Hollywood High School Historic District (1521 N Highland Avenue)
- Hollywood High School Liberal Arts Building (1521 N Highland Avenue)
- Max Factor Makeup Salon (1666 N Highland Avenue)
- Hollywood High School Auditorium (1521 N Highland Avenue)
- Hollywood Walk of Fame
- Hollywood Boulevard Commercial and Entertainment District
- 1145 N Sycamore Avenue
- 1143 N Sycamore Avenue
- 1133 N Detroit Street
- Clem Wilson/Mutual Omaha Building
- Zephyr Club
- 5352-5354 Wilshire Boulevard
- 330 N La Brea Avenue
- 357 N La Brea Avenue
- Morris Memorial

HOLLYWOOD BOWL DESIGN OPTION

For the Hollywood Bowl Design Option, MM CUL-2 shall be implemented for the following two historical resources:

- Lasky DeMille Studio Barn
- Hollywood Bowl Pedestrian Tunnel

3.6.7.4.3 MM CUL-3: HISTORICAL RESOURCES ARCHIVAL DOCUMENTATION

Metro shall provide archival documentation of the historical resources listed below for each of the alignments, following the guidelines of the National Park Service's Historic American Buildings Survey/Historic American Engineering Record/Historic American Landscape Survey (HABS/HAER/HALS) program. Documentation requirements would be outlined in the CRMMP (see MM CUL-5) and at a minimum shall consist of:

- Large-format photography, including negatives and archival prints
- Written narrative following the HABS/HAER/HALS short format
- Site plan

Metro shall provide copies of the documentation to the City of Los Angeles and City of West Hollywood for archival purposes. Large-format photography shall be completed prior to any demolition activities that would affect these resources. The documentation shall be prepared so that the original archival-quality documentation could be donated for inclusion in the Library of Congress if the National Park Service accepts these materials. Copies of documentation shall also be offered to the Los Angeles Public Library and local historical societies upon request.

KNE SAN VICENTE–FAIRFAX ALIGNMENT

For the KNE San Vicente–Fairfax Alignment, MM CUL-3 shall be implemented for the following five resources:

- 6806 Hollywood Boulevard
- Rexall Drug Store, Lee Drug Company (6800 Hollywood Boulevard)
- Bank of America (6780 Hollywood Boulevard)
- Hollywood Theater (6766 Hollywood Boulevard)
- Santa Palm Car Wash (8787 Santa Monica Boulevard)

KNE FAIRFAX ALIGNMENT

For the KNE Fairfax Alignment, MM CUL-3 shall be implemented for the following four resources:

- 6806 Hollywood Boulevard
- Rexall Drug Store, Lee Drug Company (6800 Hollywood Boulevard)

- Bank of America (6780 Hollywood Boulevard)
- Hollywood Theater (6766 Hollywood Boulevard)

KNE LA BREA ALIGNMENT

For the KNE La Brea Alignment, MM CUL-3 shall be implemented for the following four resources:

- 6806 Hollywood Boulevard
- Rexall Drug Store, Lee Drug Company (6800 Hollywood Boulevard)
- Bank of America (6780 Hollywood Boulevard)
- Hollywood Theater (6766 Hollywood Boulevard)

3.6.7.4.4 MM CUL-4: INTERPRETIVE PROGRAM

Metro shall provide interpretive materials in the form of an exhibit, pamphlet, website, or similar material that describe and/or illustrate the historic significance of the historical resources listed below for each of the alignments, per the CRMMP (see MM CUL-5).

Interpretive materials shall be provided to the City of Los Angeles and City of West Hollywood for public education purposes. Copies of interpretive materials shall also be offered to the Los Angeles Public Library and local historical societies upon request.

KNE SAN VICENTE–FAIRFAX ALIGNMENT

For the KNE San Vicente–Fairfax Alignment, MM CUL-4 shall be implemented for the following five historical resources:

- 6806 Hollywood Boulevard
- Rexall Drug Store, Lee Drug Company (6800 Hollywood Boulevard)
- Bank of America (6780 Hollywood Boulevard)
- Hollywood Theater (6766 Hollywood Boulevard)
- Santa Palm Car Wash (8787 Santa Monica Boulevard)

KNE FAIRFAX ALIGNMENT

For the KNE Fairfax Alignment, MM CUL-4 shall be implemented for the following four resources:

- 6806 Hollywood Boulevard
- Rexall Drug Store, Lee Drug Company (6800 Hollywood Boulevard)
- Bank of America (6780 Hollywood Boulevard)
- Hollywood Theater (6766 Hollywood Boulevard)

KNE LA BREA ALIGNMENT

For the KNE La Brea Alignment, MM CUL-4 would be implemented for the following four resources:

- 6806 Hollywood Boulevard
- Rexall Drug Store, Lee Drug Company (6800 Hollywood Boulevard)
- Bank of America (6780 Hollywood Boulevard)
- Hollywood Theater (6766 Hollywood Boulevard)

3.6.7.4.5 MM CUL-5: CULTURAL RESOURCES MONITORING AND MITIGATION PLAN (CRMMP)

To mitigate impacts to archaeological resources that may be encountered in the RSA during construction activities, a CRMMP shall be developed and implemented by Metro. The CRMMP shall provide information on project personnel roles and responsibilities, establish procedures for cultural resources training for construction personnel (see MM CUL-6), include guidelines for treatment of unanticipated discoveries and human remains, and outline monitoring requirements and protocols (see MM CUL-7 and MM CUL-8).

The CRMMP shall require that an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61) in prehistoric and historical archaeology be retained prior to ground-disturbing activities to implement CRMMP requirements.

The CRMMP shall provide details on procedures to follow when encountering unanticipated archaeological resources. If buried archaeological resources, such as flaked or ground stone, historic debris, building foundations, or culturally modified non-human bone, are discovered during project-related ground-disturbing activities within any part of the RSA, work would stop 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. Work may continue in other areas of the project. The CRMMP shall include a detailed prehistoric and historic context that clearly states the themes under which any subsurface deposits identified during construction would be determined significant under CEQA. 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. A Native American monitor shall be retained if treatment involves work at a prehistoric site, or at other locations determined appropriate during tribal consultation.

Archaeological and Native American monitoring shall be required at locations with moderate sensitivity for buried archaeological deposits, including areas of new station construction and TBM launch and extraction sites (see mitigation measures MM CUL-7 and MM CUL-8), protocols for which would be established in the CRMMP. 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.

Additionally, the CRMMP shall outline and describe in depth the mitigation measures (see mitigation measures MM CUL-1 through MM CUL-4) dedicated to mitigating impacts for the built environment resources that qualify as historical resources for the purposes of CEQA. Protocol for inadvertent discoveries of human remains (see MM CUL-9) shall also be outlined and described in depth.

3.6.7.4.6 MM CUL-6: CULTURAL RESOURCES TRAINING

Prior to any ground-disturbing activities, all construction personnel involved in ground-disturbing activities shall be provided with appropriate cultural resources training in accordance with the project CRMMP (see MM CUL-5). The training will instruct the personnel regarding the legal framework protecting cultural resources, typical kinds of cultural resources that may be found within the RSA, and proper procedures and notifications if cultural resources are inadvertently discovered.

3.6.7.4.7 MM CUL-7: ARCHAEOLOGICAL MONITORING

Project-related ground-disturbing activities shall be monitored by a qualified archaeologist, in accordance with the project CRMMP (see MM CUL-5). If archaeological artifacts are discovered, then work shall be halted in the immediate vicinity of the find and a qualified archaeologist shall assess the significance of the find and, if necessary, develop appropriate treatment measures, per the CRMMP (see MM CUL-5).

3.6.7.4.8 MM CUL-8: NATIVE AMERICAN MONITORING

Project-related ground-disturbing activities conducted in areas identified as having moderate sensitivity for buried archaeological deposits, and other locations determined appropriate through AB 52 consultation, shall be monitored by a Native American representative from an NAHC identified tribe, in accordance with the project CRMMP as detailed in MM CUL-5. The tribal monitor shall be ancestrally affiliated with the RSA and vicinity and qualified by their tribe to monitor for tribal cultural resources.

In the event that an archaeological resource discovered during project construction is determined to be potentially of Native American origin based on the initial assessment of the find by a qualified archaeologist pursuant to California PRC Section 21083.2(i), the Native American tribes that consulted on the proposed project pursuant to AB 52 shall be notified and be provided information about the find to allow for early input from the tribal representatives with regard to the potential significance and treatment of the resource. Resources shall be treated with culturally appropriate dignity, taking into consideration the tribal cultural values and meaning of the resource. The input of all consulting tribes shall be considered in the preparation of any required treatment plan activities prepared by the qualified archaeologist for any prehistoric archaeological resources or tribal cultural resources identified during the project. Work in the area of the discovery may not resume until evaluation and treatment of the resource is completed and/or the resource is recovered and removed from the site. Construction activities may continue on other parts of the construction site while evaluation and treatment of the resource takes place.

3.6.7.4.9 MM CUL-9: UNANTICIPATED DISCOVERY OF HUMAN REMAINS

If human remains are discovered, work in the immediate vicinity of the discovery shall be suspended and the Los Angeles County Coroner shall be contacted. If the remains are deemed Native American in origin, the coroner shall contact the NAHC and a Most Likely Descendant (MLD) would be identified pursuant to PRC Section 5097.98 and CCR Section 15064.5. The MLD may inspect the site within 48 hours of being notified and issue recommendations for scientific removal and nondestructive analysis. If the MLD fails to make recommendations, then Metro and/or the landowner may rebury the remains in a location not subject to further disturbance at their discretion. Work may be resumed at the landowner's discretion but would only commence after consultation with the Los Angeles County Coroner, the MLD, and Metro has been concluded and treatment of the remains has been resolved. Work may continue on other parts of the project while consultation and treatment are conducted.

3.6.7.4.10 IMPACT SIGNIFICANCE AFTER MITIGATION

As described in Sections 3.6.7.1, 3.6.7.2, and 3.6.7.3, there would be significant impacts related to historical resources (Impact CUL-1), archaeological resources (Impact CUL-2), and disturbance of human remains (Impact CUL-3) during construction of the KNE San Vicente–Fairfax Alignment, KNE Fairfax Alignment, KNE La Brea Alignment, and Hollywood Bowl Design Option, and there would be a significant impact related to disturbance of human remains (Impact CUL-3) during construction of the MSF. The subsections below describe the impact significance for each of the alignments, the design option, and the MSF after implementation of mitigation.

3.6.7.4.10.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

IMPACT CUL-1: HISTORICAL RESOURCES

Under the KNE San Vicente–Fairfax Alignment, mitigation measures MM CUL-1 (Protection Measures – Differential Settlement/Vibration/TBM Specifications) and MM CUL-5 (Cultural Resources Monitoring and Mitigation Plan) would be implemented at the two resources identified in Section 3.6.7.4.1 where there would be a significant impact related to ground settlement (see Table 3.6-7). In addition, mitigation measures MM CUL-2 (Construction Vibration Protection Measures – Historical Resources) and MM CUL-5 (Cultural Resources Monitoring and Mitigation Plan) would be implemented at the 20 resources (inclusive of the two resources listed above) identified for the KNE San Vicente–Fairfax Alignment in Section 3.6.7.4.2 where there would be significant impacts related to construction vibration (see Table 3.6-7). With implementation of mitigation measures MM CUL-1, MM CUL-2, and MM CUL-5, the impact during construction of the KNE San Vicente–Fairfax Alignment on the 20 resources referenced above would be reduced to a less than significant level.

Under the KNE San Vicente–Fairfax Alignment, mitigation measures MM CUL-3 (Historical Resources Archival Documentation), MM CUL 4 (Interpretive Program), and MM CUL-5 (Cultural Resources Monitoring and Mitigation Plan) would be implemented at the following five resources:

- 6806 Hollywood Boulevard
- Rexall Drug Store, Lee Drug Company (6800 Hollywood Boulevard)

- Bank of America (6780 Hollywood Boulevard)
- Hollywood Theater (6766 Hollywood Boulevard)
- Santa Palm Car Wash (8787 Santa Monica Boulevard)

However, because these five resources would be demolished, the impact during construction of the KNE San Vicente–Fairfax Alignment would be significant and unavoidable.

IMPACT CUL-2: ARCHAEOLOGICAL RESOURCES

Implementation of mitigation measures MM CUL 5 (Cultural Resources Monitoring and Mitigation Plan), MM CUL-6 (Cultural Resources Training), MM CUL-7 (Archaeological Monitoring), and MM CUL-8 (Native American Monitoring) during construction of the KNE San Vicente–Fairfax Alignment would reduce impacts to P-19-003045 and unknown archaeological historical resources or unique archaeological resources to a less than significant level.

IMPACT CUL-3: DISTURBANCE OF HUMAN REMAINS

Implementation of mitigation measures MM CUL-5 (Cultural Resources Monitoring and Mitigation Plan) and MM CUL-9 (Unanticipated Discovery of Human Remains) during construction of the KNE San Vicente–Fairfax Alignment would reduce impacts to unknown buried human remains, including those interred outside formal cemeteries, to a less than significant level.

3.6.7.4.10.2 KNE FAIRFAX ALIGNMENT

IMPACT CUL-1: HISTORICAL RESOURCES

Under the KNE Fairfax Alignment, mitigation measure MM CUL-1 (Protection Measures – Differential Settlement/Vibration/TBM Specifications) and MM CUL-5 (Cultural Resources Monitoring and Mitigation Plan) would be implemented at the two resources identified in Section 3.6.7.4.1 where there would be a significant impact related to ground settlement (see Table 3.6-8). In addition, mitigation measures MM CUL-2 (Construction Vibration Protection Measures – Historical Resources) and MM CUL-5 (Cultural Resources Monitoring and Mitigation Plan) would be implemented at the 19 resources (inclusive of the two resources listed above) identified for the KNE Fairfax Alignment in Section 3.6.7.4.2 where there would be significant impact related to construction vibration (see Table 3.6-8). With implementation of mitigation measures MM CUL-1, MM CUL-2, and MM CUL-5, the impact during construction of the KNE Fairfax Alignment on the 19 resources referenced above would be reduced to a less than significant level.

Under the KNE Fairfax Alignment, mitigation measures MM CUL-3 (Historical Resources Archival Documentation), MM CUL 4 (Interpretive Program), and MM CUL-5 (Cultural Resources Monitoring and Mitigation Plan) would be implemented at the following four resources:

- 6806 Hollywood Boulevard
- Rexall Drug Store, Lee Drug Company (6800 Hollywood Boulevard)

- Bank of America (6780 Hollywood Boulevard)
- Hollywood Theater (6766 Hollywood Boulevard)

However, because these four resources would be demolished, the impact during construction of the KNE Fairfax Alignment would be significant and unavoidable.

IMPACT CUL-2: ARCHAEOLOGICAL RESOURCES

Implementation of mitigation measures MM CUL 5 (Cultural Resources Monitoring and Mitigation Plan), MM CUL-6 (Cultural Resources Training), MM CUL-7 (Archaeological Monitoring), and MM CUL-8 (Native American Monitoring) during construction of the KNE Fairfax Alignment would reduce impacts to P-19-003045 and unknown archaeological historical resources or unique archaeological resources to a less than significant level.

IMPACT CUL-3: DISTURBANCE OF HUMAN REMAINS

Implementation of mitigation measures MM CUL-5 (Cultural Resources Monitoring and Mitigation Plan) and MM CUL-9 (Unanticipated Discovery of Human Remains) during construction of the KNE Fairfax Alignment would reduce impacts to unknown buried human remains, including those interred outside formal cemeteries, to a less than significant level.

3.6.7.4.10.3 KNE LA BREA ALIGNMENT

IMPACT CUL-1: HISTORICAL RESOURCES

Under the KNE La Brea Alignment, mitigation measure MM CUL-1 (Protection Measures – Differential Settlement/Vibration/TBM Specifications) and MM CUL-5 (Cultural Resources Monitoring and Mitigation Plan) would be implemented at the two resources identified in Section 3.6.7.4.1 where there would be a significant impact related to ground settlement (see Table 3.6-9). In addition, mitigation measures MM CUL-2 (Construction Vibration Protection Measures – Historical Resources) and MM CUL-5 (Cultural Resources Monitoring and Mitigation Plan) would be implemented at the 19 resources (inclusive of the two resources listed above) identified for the KNE La Brea Alignment in Section 3.6.7.4.2 where there would be significant impact related to construction vibration (see Table 3.6-9). With implementation of mitigation measures MM CUL-1, MM CUL-2, and MM CUL-5, the impact during construction of the KNE La Brea Alignment on the 19 resources referenced above would be reduced to a less than significant level.

Under the KNE La Brea Alignment, mitigation measures MM CUL-3 (Historical Resources Archival Documentation), MM CUL 4 (Interpretive Program), and MM CUL-5 (Cultural Resources Monitoring and Mitigation Plan) would be implemented at the following four resources:

- 6806 Hollywood Boulevard
- Rexall Drug Store, Lee Drug Company (6800 Hollywood Boulevard)
- Bank of America (6780 Hollywood Boulevard)
- Hollywood Theater (6766 Hollywood Boulevard)

However, because these four resources would be demolished, the impact during construction of the KNE La Brea Alignment would be significant and unavoidable.

IMPACT CUL-2: ARCHAEOLOGICAL RESOURCES

Implementation of mitigation measures MM CUL 5 (Cultural Resources Monitoring and Mitigation Plan), MM CUL-6 (Cultural Resources Training), MM CUL-7 (Archaeological Monitoring), and MM CUL-8 (Native American Monitoring) during construction of the KNE La Brea Alignment would reduce impacts to unknown archaeological historical resources or unique archaeological resources to a less than significant level.

IMPACT CUL-3: DISTURBANCE OF HUMAN REMAINS

Implementation of mitigation measures MM CUL-5 (Cultural Resources Monitoring and Mitigation Plan) and MM CUL-9 (Unanticipated Discovery of Human Remains) during construction of the KNE La Brea Alignment would reduce impacts to unknown buried human remains, including those interred outside formal cemeteries, to a less than significant level.

3.6.7.4.10.4 HOLLYWOOD BOWL DESIGN OPTION

IMPACT CUL-1: HISTORICAL RESOURCES

Under the Hollywood Bowl Design Option, mitigation measures MM CUL-2 (Construction Vibration Protection Measures – Historical Resources) and MM CUL-5 (Cultural Resources Monitoring and Mitigation Plan) would be implemented at the Lasky DeMille Studio Barn. For the Hollywood Bowl Pedestrian Tunnel, MM CUL-1 (Protection Measures – Differential Settlement/Vibration/TBM Specifications) would be implemented in addition to MM CUL-2 and MM CUL-5. With implementation of these mitigation measures, the impact during construction of the Hollywood Bowl Design Option on the two resources referenced above would be reduced to a less than significant level.

IMPACT CUL-2: ARCHAEOLOGICAL RESOURCES

Implementation of mitigation measures MM CUL 5 (Cultural Resources Monitoring and Mitigation Plan), MM CUL-6 (Cultural Resources Training), MM CUL-7 (Archaeological Monitoring), and MM CUL-8 (Native American Monitoring) during construction of the Hollywood Bowl Design Option would reduce impacts to unknown archaeological historical resources or unique archaeological resources to a less than significant level.

IMPACT CUL-3: DISTURBANCE OF HUMAN REMAINS

Implementation of mitigation measures MM CUL-5 (Cultural Resources Monitoring and Mitigation Plan) and MM CUL-9 (Unanticipated Discovery of Human Remains) during construction of the Hollywood Bowl Design Option would reduce impacts to unknown buried human remains, including those interred outside formal cemeteries, to a less than significant level.

3.6.7.4.10.5 MAINTENANCE AND STORAGE FACILITY

IMPACT CUL-3: DISTURBANCE OF HUMAN REMAINS

Implementation of mitigation measures MM CUL-5 (Cultural Resources Monitoring and Mitigation Plan) and MM CUL-9 (Unanticipated Discovery of Human Remains) during construction of the MSF would reduce impacts to unknown buried human remains, including those interred outside formal cemeteries, to a less than significant level.

3.6.7.5 SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

Table 3.6-11 summarizes the cultural resources impact significance conclusions and applicable mitigation measures.

TABLE 3.6-11. KNE SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES FOR CULTURAL RESOURCES

IMPACT		IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES				
		KNE SAN VICENTE–FAIRFAX ALIGNMENT	KNE FAIRFAX ALIGNMENT	KNE LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MAINTENANCE AND STORAGE FACILITY
Impact CUL-1: Historical Resources	Impact Before Mitigation	Construction: Significant Operation: LTS	Construction: Significant Operation: LTS	Construction: Significant Operation: LTS	Construction: Significant Operation: LTS	Construction: No Impact Operation: No Impact
	Mitigation Measures	Construction: MM CUL-1 – MM CUL-5 Operation: None Required	Construction: MM CUL-1 – MM CUL-5 Operation: None Required	Construction: MM CUL 1 – MM CUL-5 Operation: None Required	Construction: MM CUL-1, MM CUL-2, MM CUL-5 Operation: None Required	None Required
	Impact After Mitigation	Construction: SAU Operation: LTS	Construction: SAU Operation: LTS	Construction: SAU Operation: LTS	Construction: LTS Operation: LTS	Construction: No Impact Operation: No Impact
Impact CUL-2: Archaeological Resources	Impact Before Mitigation	Construction: Significant Operation: No Impact	Construction: Significant Operation: No Impact	Construction: Significant Operation: No Impact	Construction: Significant Operation: No Impact	Construction: LTS Operation: No Impact
	Mitigation Measures	Construction: MM CUL-5 – MM CUL-8 Operation: None Required	Construction: MM CUL-5 – MM CUL-8 Operation: None Required	Construction: MM CUL-5 – MM CUL-8 Operation: None Required	Construction: MM CUL-5 – MM CUL-8 Operation: None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: No Impact	Construction: LTS Operation: No Impact	Construction: LTS Operation: No Impact	Construction: LTS Operation: No Impact	Construction: LTS Operation: No Impact

IMPACT		IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES				
		KNE SAN VICENTE–FAIRFAX ALIGNMENT	KNE FAIRFAX ALIGNMENT	KNE LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MAINTENANCE AND STORAGE FACILITY
Impact CUL-3: Disturbance of Human Remains	Impact Before Mitigation	Construction: Significant Operation: No Impact	Construction: Significant Operation: No Impact	Construction: Significant Operation: No Impact	Construction: Significant Operation: No Impact	Construction: Significant Operation: No Impact
	Mitigation Measures	Construction: MM CUL-5, MM CUL-9 Operation: None Required	Construction: MM CUL-5, MM CUL-9 Operation: None Required	Construction: MM CUL-5, MM CUL-9 Operation: None Required	Construction: MM CUL-5, MM CUL-9 Operation: None Required	Construction: MM CUL-5, MM CUL-9 Operation: None Required
	Impact After Mitigation	Construction: LTS Operation: No Impact	Construction: LTS Operation: No Impact	Construction: LTS Operation: No Impact	Construction: LTS Operation: No Impact	Construction: LTS Operation: No Impact

Source: Connect Los Angeles Partners 2024
Note: LTS = less than significant impact; SAU = significant and unavoidable impact

3.6.8 PALEONTOLOGICAL RESOURCES INTRODUCTION

This discussion provides an evaluation of KNE as it relates to paleontological resources. It includes descriptions of the state and local regulatory setting, existing conditions, and the impacts from construction and operation of the proposed alignments and stations, design option, and MSF, as well as mitigation measures where applicable. For more detailed information, refer to the KNE Cultural and Paleontological Resources Technical Report (Appendix 3.6-A).

3.6.9 REGULATORY FRAMEWORK

3.6.9.1 FEDERAL

No federal regulations are applicable to the project regarding paleontological resources.

3.6.9.2 STATE

The following state laws and regulations are relevant to construction and operation of the project:

- California Environmental Quality Act (PRC Sections 21000-21177)
- California PRC Section 5097 and Section 30244

3.6.9.3 REGIONAL

No regional regulations are applicable to the project regarding paleontological resources.

3.6.9.4 LOCAL

The following local regulations are relevant to construction and operation of the project:

- City of Los Angeles, General Plan, Conservation Element

3.6.9.4.1 SOCIETY OF VERTEBRATE PALEONTOLOGY STANDARDS

The SVP has established standard guidelines (SVP 1995, 2010) that outline professional protocols and practices for conducting paleontological resource assessments and surveys; monitoring and mitigation; data and fossil recovery; sampling procedures; and specimen preparation, identification, analysis, and curation. State regulatory agencies with paleontological regulations and standards typically accept and use the professional standards set forth by the SVP.

3.6.10 METHODOLOGY

3.6.10.1 CEQA METHODOLOGY

The purpose of this analysis is to evaluate the project against CEQA thresholds of significance as the basis for determining the level of impacts related to paleontological resources. The methodology used for paleontological resources included delineation of the RSA, review of geologic maps, a paleontological

records search, and a literature review. Because the paleontological resources RSA surface is largely obscured by urbanization, a comprehensive field survey was not warranted.

3.6.10.2 SIGNIFICANCE THRESHOLDS

In accordance with Appendix G of the 2022 CEQA Guidelines, the project would have a significant impact related to paleontological resources if it would:

- Impact PAL-1: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

3.6.11 RESOURCE STUDY AREA

The paleontological resources RSA encompasses areas where temporary or permanent ground disturbance may occur and includes all proposed ROW, acquisition, and construction areas for the alignments and stations, the design option, and the MSF.

An overview of the paleontological resources RSA is provided on Figure 3.6-1 in Section 3.6.4, and Figure 3.6-2 in Section 3.6.4 shows the MSF RSA.

3.6.12 EXISTING SETTING

This existing setting discussion summarizes current conditions related to paleontological resources within and near the KNE RSA.

3.6.12.1 REGIONAL SETTING

KNE is located in a relatively flat area of the Los Angeles Basin. The basin is bounded by the Santa Monica Mountains to the northwest, the San Gabriel Mountains to the north, and the San Bernardino and San Jacinto Mountains to the east. The basin was formed by alluvial and fluvial deposits derived from these surrounding mountains. Today, the vicinity of KNE is a densely populated and heavily developed city landscape.

3.6.12.1.1 GEOLOGIC SETTING

The Los Angeles Basin is a structural depression approximately 50 miles long and 20 miles wide in the northernmost Peninsular Ranges Geomorphic Province of California (Ingersoll and Rumelhart 1999). The Los Angeles Basin developed as a result of tectonic forces and the San Andreas fault zone, with subsidence occurring 18 to three million years ago (Ma) (Critelli et al. 1995). While sediments dating back to the Cretaceous (66 Ma) are preserved in the basin, continuous sedimentation began in the middle Miocene (around 13 Ma) (Yerkes et al. 1965). Since that time, sediments have been eroded into the basin from the surrounding highlands, resulting in thousands of feet of accumulation (Yerkes et al. 1965). Most of these sediments were marine, until sea level dropped in the Pleistocene Epoch and deposition of the alluvial sediments that compose the uppermost units in the Los Angeles Basin began.

Geologic mapping indicates that most of the surface of the project is covered with Pleistocene-aged (11,700 BP to 2.58 Ma) alluvium, alluvial fan, and valley deposits (mapped as Qae in Figure 3.6-3 and

Figure 3.6-4 in Section 3.6.5.1.1.1). A smaller portion of the project is covered by Holocene-aged (less than 11,700 BP) alluvium mapped as Qa. At the very northern tip of KNE, outcrops of the Topanga Formation cross the RSA.

Recent alluvial deposits (Qa) are common throughout the northern half of KNE. This younger alluvium is characterized by deposits of gravel and sand that form active parts of alluvial valleys. Holocene-aged alluvium deposits, particularly those younger than 5,000 years old, are generally too young to contain fossilized material (SVP 2010); however, they may overlay sensitive older deposits at unknown depths.

Late Pleistocene deposits (Qae) contain deposits of unsorted boulders, cobbles, gravel, and sand that form inactive parts of alluvial fans. Pleistocene-aged alluvial fan deposits cover large portions of the vicinity of KNE. In general, these alluvial sediments are composed of tan to reddish-brown sandstone and siltstone deposited during the late to middle Pleistocene. Pleistocene-aged deposits have proven to yield scientifically significant paleontological resources throughout Southern California. In the Ballona Creek drainage, green to blue Pleistocene sediments underlie the Qae sediments, and these reflect fluctuating river and marine depositional conditions. Pleistocene sediments mapped as Qoa occur near Los Angeles International Airport.

The upper claystone unit of the Topanga Formation is identified as occurring as extensive outcrops that comprise the hills at the northern end of KNE. This unit consists of micaceous clay shale or claystone (Ttusi) with thin sandstone interbedded basalt (Tvb). The Topanga Formation is interpreted to represent wave-dominated coastal deposits grading into river-dominated deltaic deposits and fluvial deposits in the upper parts of the formation (Critelli and Ingersoll 1995). The Topanga Formation dates to the middle Miocene, around 20 to 16 Ma. Fossils from the Topanga Formation include numerous invertebrate and vertebrate remains from both marine and terrestrial settings, including Desmostylus (McLeod, pers. com., 2023), sharks, bony fishes, birds, whales, dolphins, and land mammals (Koch et al. 2004; Campbell and Yerkes 1980; Whistler and Lander 2003).

Table 3.6-12 provides a summary of the geologic units that the alignments and stations, the design option, and the MSF would cross and the paleontological potential for each.

TABLE 3.6-12. PALEONTOLOGICAL POTENTIAL OF GEOLOGIC UNITS IN THE RSA

GEOLOGIC GROUP	ABBREVIATION	UNIT DESCRIPTION	PALEONTOLOGICAL POTENTIAL
Unconsolidated detrital sediments	Qa	Holocene alluvium	Low
	Qc	Holocene sand and clay of pre-development marshlands	Low
Older surficial sediments	Qae	Late Pleistocene alluvial fan sediments	High
	Qoa	Late Pleistocene older alluvium	High
Late Miocene sediments	Tush	Unnamed Shale	High
Middle Miocene sediments	Ttusi	Upper Topanga Formation	High
	Tvb	Basaltic volcanic rocks	Low

Source: Dibblee and Ehrenspeck 1991a and 1991b; Dibblee and Minch 2007
KNE = K Line Northern Extension; RSA = resource study area

3.6.12.1.2 INVENTORY RESULTS

Portions of the KNE alignments and stations, the design option, and the MSF would cross geologic units with high paleontological potential (Qae, Qoa, Ttusi). Additionally, the Natural History Museum of Los Angeles County (LACM) paleontological records search revealed extensive records of paleontological localities (fossil localities) near the various project components, and one that directly overlaps with the RSA (Bell 2023). Furthermore, a paleontological literature search revealed additional localities not listed in the records search report.

3.6.12.1.2.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

The KNE San Vicente–Fairfax Alignment originates at the Metro K Line Expo/Crenshaw Station in Qa sediments. It then passes into Qae sediments just south of I-10. Just over 1.2 miles west of Crenshaw Boulevard on Jefferson Boulevard lie two LACM vertebrate localities. LACM 336 produced a camel fossil, and LACM 3369 produced a horse fossil. Although the surficial geology at these locations is mapped as Qa, the fossils come from subsurface Pleistocene deposits. North of I-10, the alignment begins at a curve to the west and crosses a narrow belt of Qa sediment (Ballona Creek Valley). This narrow belt of Qa sediments corresponds to the historic path of Ballona Creek, and one LACM vertebrate fossil locality (7137) falls both within the alignment and within the path of the creek. Two other localities (1226 and 1783) lie in Qae sediments, but very near the Qa sediments of Ballona Creek. Localities 7137 and 1226 produced bison fossils. Locality 1783 produced ground sloth, horse, camel, and bison fossils. From Ballona Creek, the alignment continues in Qae sediments northwest along San Vicente Boulevard, and then curves northward toward Wilshire Boulevard at Fairfax Avenue.

Near the intersection of Fairfax Avenue and Wilshire Boulevard are many Pleistocene brea (asphalt) deposits, some of them part of the world-famous La Brea Tar Pits. There are many Pleistocene fossil localities, particularly in and around the Rancho La Brea Tar Pits in Hancock Park. These localities occur in asphaltic sands and silts and those deposits producing extinct organisms dated from 11,000 to 38,000

years old. These occur from ground surface to perhaps 45 feet deep. Hundreds of animal and plant species have been found there. Mammoths, mastodons, ground sloths, camels, saber-tooth cats, and dire wolves are among the animal species that attract public interest. The location and accessibility of these deposits make them truly unique (Turner 2006). This area and the fossils it produced have been the subject of intensive research on geology, paleontology, and archaeology for over 150 years. In 1951, this general site was designated as the type locality for the Rancholabrean North American Land Mammal Age, meaning it is the site of reference for fossils between 240,000 and 11,000 years ago in North America. The site was also formally recognized by the National Park Service in 1964 as a National Natural Landmark. Many newspaper accounts have featured fossils found while excavating the Wilshire/Fairfax Station for the Metro D Line.

At 3rd Steet, the alignment continues north along Fairfax Avenue and passes into Qa sediments. Between 3rd Street and Beverly Boulevard, the alignment passes five LACM vertebrate fossil localities. Construction of The Grove at the Original Farmers Market unearthed a variety of fossils, including mammoth, camel, bison, horse, rodents, and turtle. The surficial sediments there are mapped as Qae. Another locality from construction at The Grove produced a rodent fossil at a depth of 46 feet. The sediments at that depth are assigned to the Palos Verdes Sand (a marine formation). West of Fairfax Avenue lie three localities in Qa sediments. Proboscidean fossils were recovered at a depth of 20 feet near 3rd Street and Edinburgh Avenue. A bit farther west, proboscidean fossils were found both near 5th Street and San Vicente Boulevard, and Colgate Avenue and San Vicente Boulevard.

Still in Qa sediments, the alignment turns west at Beverly Boulevard. Proboscidean fossils were found in the vicinity of Kilkea Drive and Beverly Boulevard. Deer and Proboscidea remains were found near 3rd Street and San Vicente Boulevard. Then the alignment turns northwest at San Vicente Boulevard. Two vertebrate fossil localities lie east of San Vicente Boulevard. In the vicinity of the 300 block of North La Cienega Boulevard, 150 specimens of plant, invertebrate, and multiple mastodon fossils were found. A horse fossil was found near the intersection of Rosewood Avenue and Westbourne Drive. The alignment turns northeast under Santa Monica Boulevard and terminates at Fairfax Avenue. All localities along this alignment west of Fairfax Avenue lie in Qae sediment beneath surficial Qya sediments. No localities lie between the San Vicente/Santa Monica Station and the Hollywood/Highland Station.

3.6.12.1.2.2 KNE FAIRFAX ALIGNMENT

The KNE Fairfax is confluent with the KNE San Vicente–Fairfax Alignment from the current Metro K Line terminus at Expo/Crenshaw to the Fairfax/3rd Station between Beverly Boulevard and 3rd Street. Thus, it shares all the nearby paleontological localities with the KNE San Vicente–Fairfax Alignment up to that point. No localities lie between the Fairfax/3rd Station and the Fairfax/Santa Monica Station. The KNE Fairfax Alignment continues north on Fairfax Avenue to Santa Monica Boulevard, where it extends through a sigmoid curve to join Highland Avenue and then terminates at the Hollywood/Highland Station.

3.6.12.1.2.3 KNE LA BREA ALIGNMENT

The KNE La Brea Alignment is confluent with the KNE San Vicente–Fairfax Alignment from the Metro K Line Expo/Crenshaw Station to the Midtown/Crossing Station. That segment is all within sediments

mapped as Qa. The alignment proceeds northeast as it becomes confluent with Redondo Boulevard. Just southeast of where Redondo Boulevard intersects with La Brea Avenue lies a vertebrate fossil locality (LACM 1814). Asphaltic sediment at that location (mapped as Qae) produced a fossil of a shrub ox at a depth of six feet. From the intersection of Redondo Boulevard and La Brea Avenue to Santa Monica Boulevard, the alignment is in Qae sediments. No recorded localities lie along that segment. The alignment then curves to the east, then north, joins Highland Avenue, and terminates at the Hollywood/Highland Station. No recorded localities occur along this last segment.

3.6.12.1.2.4 HOLLYWOOD BOWL DESIGN OPTION

From the Hollywood/Highland Station to about Camrose Drive, the path is mapped as Qae sediments. From south of Camrose Drive to the Hollywood Bowl Station the RSA lies in a valley with Qae sediment on the surface. However, Ttusi sediments (Upper Topanga Formation) may be affected at a shallow depth. The northern extension of track north of the station follows the boundary between Qae sediments and Tvb volcanic rocks. The nearest known paleontological localities are invertebrate localities (LACM IP 22304 and 22305) in the vicinity of Pilgrimage Bridge. Mollusk fossils were found at these sites. The nearest vertebrate fossil locality is 1.5 miles northwest of the proposed station. A Desmostylus fossil was found there. The invertebrate localities are on the US-101 freeway opposite of this design option (east of the US-101 Freeway).

3.6.12.1.2.5 MAINTENANCE AND STORAGE FACILITY

The MSF site lies in sediments mapped as Qoa. Three fossil localities are recorded in the vicinity: LACM VP locality 7332 is northwest of the proposed MSF, LACM VP locality 4942 lies to the north, and LACM VP locality 3789 lies to the south.

3.6.13 PROJECT MEASURES

Project measures are design features, best management practices, or other commitments that Metro would implement as part of all proposed alignments, the design option, and the MSF to reduce or avoid environmental effects associated with project construction and operation. Project measures are not the same as mitigation measures, which are used to reduce an environmental impact's significance level. Where applicable, project measures are also discussed in Section 3.6.14 as part of the evaluation of environmental impacts.

There are no project measures specific to paleontological resources that have been identified.

3.6.14 IMPACT EVALUATION AND MITIGATION MEASURES

This analysis presents the construction and operational impacts for paleontological resources, as well as any applicable mitigation measures associated with KNE. A summary of the impact conclusions and applicable mitigation measures is found in Table 3.6-13 in Section 3.6.14.3.

3.6.14.1 IMPACT PAL-1: PALEONTOLOGICAL RESOURCES

Impact PAL-1: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

3.6.14.1.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.6.14.1.1.1 CONSTRUCTION IMPACTS

Significant Impact The KNE San Vicente–Fairfax Alignment is the longest of the three proposed alignments, with a total of 9.7 miles of tunnel boring, of which 6.4 miles would be in Qa sediments (low paleontological potential) and 3.3 miles in Qae sediments (high paleontological potential). Additionally, LACM vertebrate fossil 7137 was identified within the RSA, and many other paleontological localities are known along the route, several of which are located in areas mapped as Qa, indicating that older Pleistocene sediments lie beneath younger Holocene sediments. Construction of this alignment could directly or indirectly destroy a unique paleontological resource or site or a unique geologic feature. Therefore, the KNE San Vicente–Fairfax Alignment would have a potentially significant impact during construction, and mitigation would be required.

3.6.14.1.1.2 OPERATIONAL IMPACTS

No Impact. Operational activities associated with the KNE San Vicente–Fairfax Alignment would be limited to the operation and maintenance of the project and would not include ground-disturbing activities. As a result, operation of this alignment would not directly or indirectly destroy a unique paleontological resource or site or a unique geologic feature. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during operation.

3.6.14.1.2 KNE FAIRFAX ALIGNMENT

3.6.14.1.2.1 CONSTRUCTION IMPACTS

Significant Impact. The KNE Fairfax Alignment has a total of 7.8 miles of boring, of which 6.4 miles would be in Qa sediments (low paleontological potential) and 3.3 miles in Qae sediments (high paleontological potential). Additionally, as with the other KNE alignments, LACM vertebrate fossil 7137 was identified within the RSA, and many other paleontological localities are known along the route, several of which are located in areas mapped as Qa, indicating that older Pleistocene sediments lie beneath younger Holocene sediments. Construction of this alignment could directly or indirectly destroy a unique paleontological resource or site or a unique geologic feature. Therefore, the KNE Fairfax Alignment would have a potentially significant impact during construction, and mitigation would be required.

3.6.14.1.2.2 OPERATIONAL IMPACTS

No Impact. Operational activities associated with the KNE Fairfax Alignment would be limited to the operation and maintenance of the project and would not include ground-disturbing activities. As a result, operation of this alignment would not directly or indirectly destroy a unique paleontological resource or

site or a unique geologic feature. Therefore, the KNE Fairfax Alignment would have no impact during operation.

3.6.14.1.3 KNE LA BREA ALIGNMENT

3.6.14.1.3.1 CONSTRUCTION IMPACTS

Significant Impact. The KNE La Brea Alignment is the shortest of the three proposed alignments with a total of 6.2 miles of boring, of which 2.3 miles are in Qa (low paleontological potential) and 3.9 miles in Qae (high paleontological potential). Additionally, LACM vertebrate fossil 7137 was identified within the RSA, and many other paleontological localities are known along the route, several of which are located in areas mapped as Qa, indicating that older Pleistocene sediments lie beneath younger Holocene sediments. Construction of this alignment could directly or indirectly destroy a unique paleontological resource or site or a unique geologic feature. Therefore, the KNE La Brea Alignment would have a potentially significant impact during construction, and mitigation would be required.

3.6.14.1.3.2 OPERATIONAL IMPACTS

No Impact. Operational activities associated with the KNE La Brea Alignment would be limited to the operation and maintenance of the project and would not include ground-disturbing activities. As a result, operation of this alignment would not directly or indirectly destroy a unique paleontological resource or site or a unique geologic feature. Therefore, the KNE La Brea Alignment would have no impact during operation.

3.6.14.1.4 HOLLYWOOD BOWL DESIGN OPTION

3.6.14.1.4.1 CONSTRUCTION IMPACTS

Significant Impact. The Hollywood Bowl Design Option RSA does not contain known paleontological resources. However, it lies in sediments designated as having high paleontological potential (Qae sediment) and paleontological resources are known to exist in the vicinity of the RSA. As a result, construction of the design option could directly or indirectly destroy a unique paleontological resource or site or a unique geologic feature. Therefore, the Hollywood Bowl Design Option could have a potentially significant impact during construction, and mitigation would be required.

3.6.14.1.4.2 OPERATIONAL IMPACTS

No Impact. Operational activities associated with the Hollywood Bowl Design Option would be limited to the operation and maintenance of the project and would not include ground-disturbing activities. As a result, operation of this design option would not directly or indirectly destroy a unique paleontological resource or site or a unique geologic feature. Therefore, the Hollywood Bowl Design Option would have no impact during operation.

3.6.14.1.5 MAINTENANCE AND STORAGE FACILITY

3.6.14.1.5.1 CONSTRUCTION IMPACTS

Significant Impacts. No paleontological resources are located within the MSF RSA. However, it lies in sediments designated as having high paleontological potential (Qoa sediment), and LACM vertebrate localities 4942 and 3789, and other paleontological resources are known to exist in the vicinity of the RSA. Construction of the MSF could directly or indirectly destroy a unique paleontological resource or site or a unique geologic feature. Therefore, the MSF would have a potentially significant impact during construction, and mitigation would be required.

3.6.14.1.5.2 OPERATIONAL IMPACTS

No Impact. Operational activities associated with the MSF would be limited to the operation and maintenance of the project and would not include ground-disturbing activities. As a result, operation of the MSF would not directly or indirectly destroy a unique paleontological resource or site or a unique geologic feature. Therefore, the MSF would have no impact during operation.

3.6.14.2 MITIGATION MEASURES

The mitigation measures described below are provided to reduce significant paleontological impacts. Section 3.6.14.2.4 discusses the impact significance after mitigation.

3.6.14.2.1 MM PAL-1: PALEONTOLOGICAL RESOURCES MONITORING AND MITIGATION PLAN (PRMMP)

To mitigate impacts to paleontological resources that may be encountered in the paleontological RSA during construction activities associated with the project, a PRMMP shall be developed and implemented by Metro. The PRMMP shall be prepared by a qualified paleontologist (project Paleontologist) prior to ground-disturbing activities, and include the following:

- Qualifications for project Paleontologist and Paleontological Monitor(s)
- Procedures for paleontological resources training for construction personnel (MM PAL-2)
- Monitoring protocol (MM PAL-2)
- Stop-work authority to temporarily stop construction activities within 50 feet of a discovered paleontological resource
- Treatment measures for discovered paleontological resources
- Curation requirements of recovered fossil materials
- Collection and testing strategies for microfossils
- Reporting requirements

3.6.14.2.2 MM PAL-2: WORKER EDUCATION

Prior to construction, the project Paleontologist or Paleontological Monitor shall inform construction personnel who would be involved with earth-moving activities that paleontological resources may be encountered during ground-disturbing activities and shall prepare and provide construction personnel with a project-specific Worker Environmental Awareness Plan outlining the requirements and procedures triggered in the event paleontological resources are uncovered during construction activities.

3.6.14.2.3 MM PAL-3: PALEONTOLOGICAL MONITORING

The project Paleontologist shall supervise the Paleontological Monitor to monitor excavation in areas identified as likely to contain paleontological resources, per the project PRMMP (MM PAL-1). These areas are defined as all areas within the older alluvium in the RSA where planned excavation would exceed three feet below the surface or three feet into undisturbed sediments, and all areas within the younger alluvium in the RSA where planned excavation would exceed 10 feet below the surface or 10 feet into undisturbed sediments. The project 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, previously described, are determined to have low potential to contain fossil resources.

3.6.14.2.4 IMPACT SIGNIFICANCE AFTER MITIGATION

As described in Section 3.6.14.1, there would be a potentially significant impact related to directly or indirectly destroying a unique paleontological resource or site or a unique geologic feature (Impact PAL-1) during construction of the KNE San Vicente–Fairfax Alignment, KNE Fairfax Alignment, KNE La Brea Alignment, Hollywood Bowl Design Option, and MSF. The subsections below describe the impact significance for each of the alignments, the design option, and the MSF after implementation of mitigation.

3.6.14.2.4.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

IMPACT PAL-1: PALEONTOLOGICAL RESOURCES

Implementation of mitigation measures MM PAL-1 (Paleontological Resources Monitoring and Mitigation Plan), MM PAL-2 (Worker Education), and MM PAL-3 (Paleontological Monitoring) during construction of the new stations associated with the KNE San Vicente–Fairfax Alignment would reduce impacts to paleontological resources to a less than significant level. However, in areas where TBMs are used for tunnel construction, these mitigation measures cannot reduce impacts to a less than significant level. Therefore, the KNE San Vicente–Fairfax Alignment would have a significant and unavoidable impact during construction.

3.6.14.2.4.2 KNE FAIRFAX ALIGNMENT

IMPACT PAL-1: PALEONTOLOGICAL RESOURCES

Implementation of mitigation measures MM PAL-1 (Paleontological Resources Monitoring and Mitigation Plan), MM PAL-2 (Worker Education), and MM PAL-3 (Paleontological Monitoring) during construction of the new stations associated with the KNE Fairfax Alignment would reduce impacts to paleontological resources to a less than significant level. However, in areas where TBMs are used for tunnel construction, these mitigation measures cannot reduce impacts to a less than significant level. Therefore, the KNE Fairfax Alignment would have a significant and unavoidable impact during construction.

3.6.14.2.4.3 KNE LA BREA ALIGNMENT

IMPACT PAL-1: PALEONTOLOGICAL RESOURCES

Implementation of mitigation measures MM PAL-1 (Paleontological Resources Monitoring and Mitigation Plan), MM PAL-2 (Worker Education), and MM PAL-3 (Paleontological Monitoring) during construction of the new stations associated with the KNE La Brea Alignment would reduce impacts to paleontological resources to a less than significant level. However, in areas where TBMs are used for tunnel construction, these mitigation measures cannot reduce impacts to a less than significant level. Therefore, the KNE La Brea Alignment would have a significant and unavoidable impact during construction.

3.6.14.2.4.4 HOLLYWOOD BOWL DESIGN OPTION

IMPACT PAL-1: PALEONTOLOGICAL RESOURCES

Mitigation measures MM PAL-1 (Paleontological Resources Monitoring and Mitigation Plan), MM PAL-2 (Worker Education), and MM PAL-3 (Paleontological Monitoring) would be implemented during construction of the Hollywood Bowl Design Option. However, in areas where SEM is used for construction, these mitigation measures cannot reduce impacts to paleontological resources to a less than significant level. Therefore, the Hollywood Bowl Design Option would have a significant and unavoidable impact during construction.

3.6.14.2.4.5 MAINTENANCE AND STORAGE FACILITY

IMPACT PAL-1: PALEONTOLOGICAL RESOURCES

Implementation of mitigation measures MM PAL-1 (Paleontological Resources Monitoring and Mitigation Plan), MM PAL-2 (Worker Education), and MM PAL-3 (Paleontological Monitoring) during construction activities associated with the MSF would reduce impacts to paleontological resources to a less than significant level.

3.6.14.3 SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

Table 3.6-13 summarizes the paleontological resources impact significance conclusions and applicable mitigation measures.

TABLE 3.6-13. KNE SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES FOR PALEONTOLOGICAL RESOURCES

IMPACT		IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES				
		KNE SAN VICENTE–FAIRFAX ALIGNMENT	KNE FAIRFAX ALIGNMENT	KNE LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MAINTENANCE AND STORAGE FACILITY
Impact PAL-1: Paleontological Resources	Impact Before Mitigation	Construction: Significant Operation: No Impact	Construction: Significant Operation: No Impact	Construction: Significant Operation: No Impact	Construction: Significant Operation: No Impact	Construction: Significant Operation: No Impact
	Mitigation Measures	Construction: MM PAL-1 – MM PAL-3 Operation: None Required	Construction: MM PAL-1 – MM PAL-3 Operation: None Required	Construction: MM PAL-1 – MM PAL-3 Operation: None Required	Construction: MM PAL-1 – MM PAL-3 Operation: None Required	Construction: MM PAL-1 – MM PAL-3 Operation: None Required
	Impact After Mitigation	Construction: SAU Operation: No Impact	Construction: SAU Operation: No Impact	Construction: SAU Operation: No Impact	Construction: SAU Operation: No Impact	Construction: LTS Operation: No Impact

Source: Connect Los Angeles Partners 2024
LTS = less than significant impact; SAU = significant and unavoidable impact

3.7 ENERGY

3.7.1 INTRODUCTION

This discussion provides an evaluation of K Line Northern Extension (KNE) as it relates to energy resources. It identifies the federal, state, and local regulatory setting and describes existing conditions and the impacts from construction and operation of the proposed alignments and stations, design option, and maintenance and storage facility (MSF), as well as mitigation measures where applicable. For more detailed information, refer to the KNE Energy Technical Report (Appendix 3.7-A).

3.7.2 REGULATORY FRAMEWORK

3.7.2.1 FEDERAL

The following federal laws and regulations are relevant to construction and operation of the project:

- Energy Policy and Conservation Act of 1975 and Alternative Motor Fuels Act of 1988
- Moving Ahead for Progress in the 21st Century Act
- Energy Policy Acts of 1992 and 2005
- Energy Independence and Security Act of 2007
- Affordable Fuel-Efficient Vehicles Rule Part One: One National Program
- Corporate Average Fuel Economy and Greenhouse Gas Emissions Standards

3.7.2.2 STATE

The following state laws and regulations are relevant to construction and operation of the project:

- California Green Building Standards Code, Title 24
- Alternative and Renewable Fuel and Vehicle Technology Program
- Assembly Bill 1007, Alternative Fuels Plan
- Assembly Bill 1493, California Advanced Clean Cars Program
- California Advanced Clean Cars II Program
- Innovative Clean Transit Regulation
- Executive Order B-16-12
- Senate Bills (SB) 1078, 350, and 100
- Executive Order N-79-20

3.7.2.3 REGIONAL

The following regional plans and regulations are relevant to construction and operation of the project:

- Regional Transportation Plan/Sustainable Communities Strategies, Southern California Association of Governments (SCAG 2020)
- Air Quality Management Plans, South Coast Air Quality Management District (SCAQMD)
- Conservation and Natural Resources Element and Mobility Element, Los Angeles County 2035 General Plan (Los Angeles County 2015)

3.7.2.4 LOCAL

Metro has adopted plans, policies, and strategies that address energy efficiency, including both general goals focused on sustainability and specific actions designed to save energy. The following policies are relevant to construction and operation of the project:

- The Energy and Sustainability Policy (Metro 2007a)
- Construction and Demolition Debris Recycling and Reuse Policy (Metro 2007b)
- Environmental Policy (Metro 2009)
- Renewable Energy Policy (Metro 2011a)
- Green Construction Policy (2011b)
- All-Hazards Mitigation Plan (Metro 2022)
- Energy Conservation and Management Plan (Metro 2011c)
- Sustainable Rail Plan (2013)
- Climate Action and Adaptation Plan (2019)
- Complete Streets Policy (Metro 2014)
- First/Last Mile Strategic Plan (Metro 2016)
- Moving Beyond Sustainability Plan (2020)
- Vision 2028 Plan (2018)

The following local plans and regulations are relevant to construction and operation of the project:

- The Los Angeles Green Building Code
- The Sustainable City Plan (City of Los Angeles 2015)
- LA100: The Los Angeles 100% Renewable Energy Study and Equity Strategies, Los Angeles Department of Water and Power (LADWP 2021)

The City of Los Angeles and City of West Hollywood have regulations, plans, programs, and policies that regulate permitting, design, construction, and operational activities as they pertain to enhancing energy efficiency and reducing vehicle trips, which are interrelated with strategies to improve sustainability, regional air quality, and traffic congestion.

3.7.3 METHODOLOGY

3.7.3.1 CEQA METHODOLOGY

The purpose of this analysis is to evaluate the project against the California Environmental Quality Act (CEQA) thresholds of significance as the basis for determining the level of impacts related to energy resources.

3.7.3.2 SIGNIFICANCE THRESHOLDS

In accordance with Appendix G of the 2022 CEQA Guidelines, the project would have a significant impact related to energy resources if it would:

- Impact ENG-1: Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation.
- Impact ENG-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

3.7.4 RESOURCE STUDY AREA

The resource study area (RSA) for the energy resources analysis is defined as the utility service areas for the alignments and stations, the design option, and the MSF. The utility service areas vary among utility type and service provider and are regional. Section 3.7.5.1.1 summarizes the energy setting associated with the utilities that serve the RSA.

Section 3.7.5.1.2 describes Metro's energy use in the RSA. In addition, since the project would improve transit operations and travel in the region, for the purposes of energy consumption associated with regional travel (i.e., fuel consumption for motor vehicles), the RSA for assessing the reduction in vehicle miles traveled (VMT) with project implementation is the entire SCAG region. Section 3.7.5.1.3 identifies the existing regional transportation energy use for the project's baseline year of 2019.

3.7.5 EXISTING SETTING

This existing setting discussion summarizes current conditions related to energy resources within and near the KNE RSA.

3.7.5.1 REGIONAL SETTING

3.7.5.1.1 UTILITY SERVICE PROVIDERS

3.7.5.1.1.1 LOS ANGELES DEPARTMENT OF WATER AND POWER

LADWP serves an area covering 465 square miles that includes over four million residents and 1.4 million power customers. As of 2021, energy sources consisted of 26 percent natural gas, 35 percent

eligible renewable sources, 19 percent coal, 14 percent nuclear, and seven percent hydroelectric resources (California Energy Commission [CEC] 2022). According to CEC data, LADWP customers consumed a total of approximately 20,891 million kilowatt-hours (kWh) of electricity in 2021 (CEC 2023a).

3.7.5.1.1.2 SOUTHERN CALIFORNIA EDISON

Southern California Edison (SCE), a subsidiary of Edison International, provides electricity to approximately 180 cities in 11 counties across Central and Southern California. SCE provides electricity to approximately 15 million people in California and is one of the largest electric utilities in the United States (SCE 2019). The CEC reports on electricity consumption by planning area annually. The total electricity usage in the SCE planning area in 2021 was 81,128.9 million kWh (CEC 2023c). SCE offers various renewable energy purchase programs for their customers. As of 2021, SCE's general power mix consisted of 22 percent natural gas, 31 percent eligible renewable sources, nine percent nuclear, two percent hydroelectric resources, and 35 percent from unspecified power sources (CEC 2022).

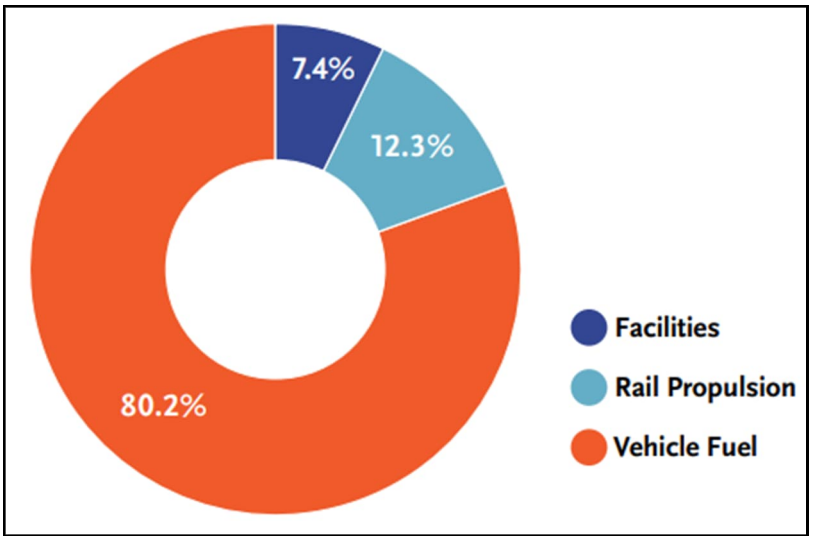
3.7.5.1.1.3 SOUTHERN CALIFORNIA GAS COMPANY

The Southern California Gas Company (SoCalGas) is a natural gas provider and subsidiary of Sempra Energy. SoCalGas provides service to about 5.9 million customers (California Public Utilities Commission 2021). In 2021, SoCalGas customers consumed approximately 5,101 million therms (CEC 2023d). SoCalGas aims to achieve net zero greenhouse gas (GHG) emissions by 2045 (SoCalGas 2021).

3.7.5.1.2 METRO ENERGY USE

Metro consumes energy in the form of fuel (gasoline, diesel, and compressed natural gas), electricity, and natural gas for its transit operations (e.g., buses, vehicles, and light and heavy rail), as well as electricity and natural gas at its various operational facilities in the region. Since 2013, Metro has steadily reduced energy consumption through conservation measures, efficient building design, and improved fuel efficiency. In 2018 alone, Metro reduced total energy consumption by 7.9 percent compared to 2017 as a result of reduced vehicle fuel consumption by buses and support vehicles (Metro 2019b). As described in Metro's Sustainability Strategic Plan (2020), building operations support over 1.2 million weekday rail and bus transit patrons. Metro's building energy consumption alone accounts for just over 100 GWh of electricity consumption per year across its extensive inventory of facilities in Los Angeles County. Metro's vehicle fleet accounts for 80 percent of the agency's total energy consumption per year. Vehicle fuels power Metro's bus fleet, vanpool, and all non-revenue vehicles. Rail propulsion power accounts for more than 200 GWh of electricity use and 12 percent of the agency's energy consumption (Metro 2020). Metro purchases electricity from local utilities, all of which are mandated to provide carbon-free energy by 2045 (SB 100). Figure 3.7-1 provides Metro's 2018 energy consumption by end use.

FIGURE 3.7-1. ENERGY CONSUMPTION BY END USE (2018)



Source: Metro 2020

3.7.5.1.3 EXISTING FUEL CONSUMPTION IN THE RSA

Transportation in Los Angeles County continues to be dominated by single-occupancy automobiles. According to the American Community Survey 2019, five-year estimate, 74 percent of Los Angeles County workers over the age of 16 drove alone to work (U.S. Census Bureau 2019). High percentages of single-occupancy vehicles result in high VMT throughout the state. Subsequently, high VMT translates into high energy use, as well as related criteria air pollutants and GHG emissions.

As shown in Table 3.7-1, existing conditions data for regional transportation-related energy consumption was modeled for the baseline year of 2019. Transportation fuel consumption was estimated based on the annual VMT as provided by the transportation model (approximately 170,339,744,680 miles) and EMFAC2021 fleet mix data for SCAQMD in 2019. Based on EMFAC2021 fleet mix data, the analysis assumed approximately 93 percent of the vehicle trips in the region were gasoline-fueled, one percent were plug-in hybrid, five percent were diesel-fueled, one percent were electric, and less than one percent were compressed natural gas.

TABLE 3.7-1. ANNUAL REGIONAL TRANSPORTATION ENERGY CONSUMPTION, EXISTING (2019) CONDITIONS

DESCRIPTION	GASOLINE DEMAND (GALLONS)	DIESEL DEMAND (GALLONS)	ELECTRICAL DEMAND (kWh)	NATURAL GAS DEMAND (GALLONS)	TOTAL ENERGY CONSUMPTION (MMBtu)
Regional Transportation-Related Fuel Consumption	6,472,949,770	51,637,916	5,618,749	294,476	816,304,774

Source: Connect Los Angeles Partners 2023
kWh= kilowatt-hours; MMBtu = million British thermal units

3.7.5.1.4 ENERGY RESOURCES AND CONSUMPTION

3.7.5.1.4.1 ENERGY RESOURCES

California is rich in conventional and renewable energy resources. It has large crude oil and substantial natural gas deposits in six geological basins located in the Central Valley and along the Pacific Coast. The state is the nation's top producer of electricity from solar energy and geothermal resources. In 2022, California was also the nation's second-largest producer of electricity from biomass and the fourth-largest producer of conventional hydroelectric power (United States Energy Information Administration [USEIA] 2023a).

California is the most populous state in the nation but has one of the lowest per capita energy consumption rates in the country (USEIA 2023a). California's state energy-efficiency programs have contributed to its low per capita energy consumption. Driven by high demand from California's many motorists, major airports, and military bases, the transportation sector is the state's largest energy consumer.

3.7.5.1.4.2 PETROLEUM

California is one of the top producers of crude oil in the nation, with output accounting for more than one-tenth of total U.S. production. Reservoirs along California's Pacific Coast, including in the Los Angeles Basin and Central Valley, contain major crude oil reserves, and the state holds four percent of the nation's total proved crude oil reserves (USEIA 2023a).

3.7.5.1.4.3 NATURAL GAS

California natural gas production accounts for less than one percent of total annual U.S. production, which is less than one-tenth of the state's total consumption. Most of California's natural gas reserves and production are in fields in the northern portion of the state's Central Valley (USEIA 2023a).

3.7.5.1.4.4 RENEWABLE ENERGY

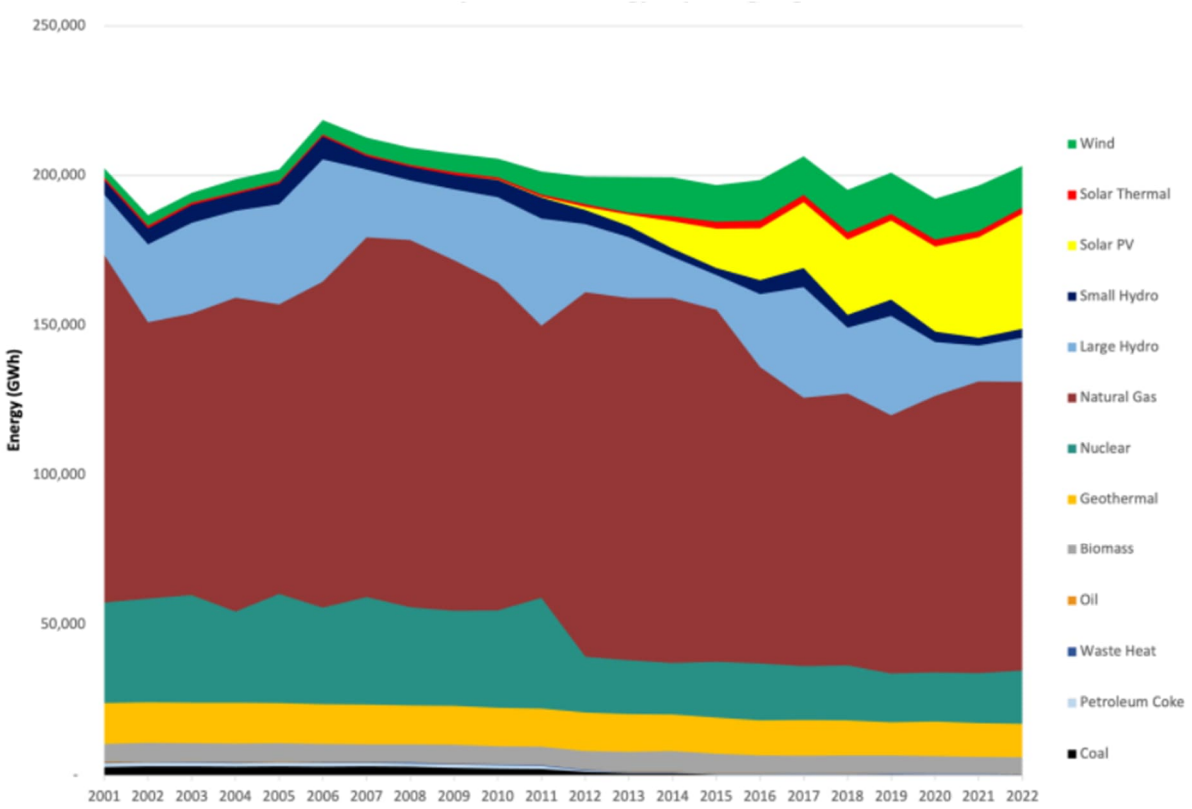
California has established Renewable Portfolio Standards targets, which reflect one of the state's key programs for advancing renewable energy. California's renewable resources are primarily solar energy (photovoltaic and wind) and geothermal resources. Solar photovoltaic energy is the largest source of California's renewable electricity generation, supplying 19 percent of the state's utility-scale electricity net generation and 27 percent of the state's total electricity net generation when small-scale solar generation is included. Wind energy accounted for seven percent of California's total in-state electricity generation in 2022. In addition, California is the nation's top producer of electricity from geothermal resources, producing 69 percent of the nation's utility-scale geothermal-sourced electricity (USEIA 2023a).

3.7.5.1.4.5 STATE ENERGY CONSUMPTION

The CEC's 2021 Integrated Energy Policy Report identifies that the state's electricity sector is adapting in response to climate policy and market changes. This includes decarbonizing the state's gas system as a fuel source for electric generation to meet air quality, climate, and other environmental goals. In 2022, total system generation for California was 287,220 gigawatt-hours (GWh), an increase of approximately three percent, or 9,456 GWh, from 2021 (CEC 2023a).

In recent years, California has witnessed a flat or downward trend in energy demand as a result of energy-efficiency programs and installation of behind-the-meter solar photovoltaic systems[1] that directly displace utility-supplied generation. Renewable and non-GHG (nuclear and large hydroelectric) resources accounted for 54.2 percent of total generation in 2022, compared to 52.1 percent in 2021. Figure 3.7-2 depicts the change in the state's electricity system generation supply mix from 2001 to 2022, including a doubling of renewable supplies (CEC 2023a).

FIGURE 3.7-2. IN-STATE ELECTRIC GENERATION BY FUEL TYPE (2011-2022)



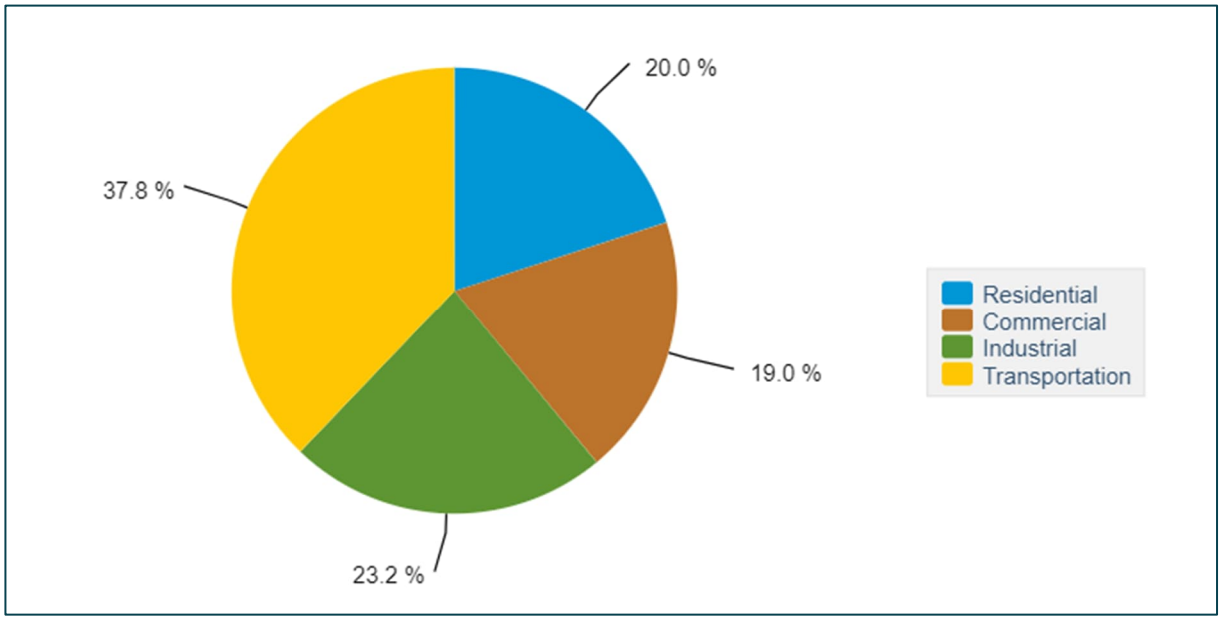
Source: CEC 2023a

[1] Behind-the-meter photovoltaic systems provide a single building or facility with direct power without passing through an electric meter.

3.7.5.1.4.6 TRANSPORTATION SECTOR

As shown in Figure 3.7-3, the transportation sector in California consumes a relatively large amount of energy in the state (approximately 38 percent). Gasoline remains the dominant fuel within the transportation sector, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles. In 2022, 13.6 billion gallons of gasoline were sold, according to the California Department of Tax and Fee Administration. Retail gasoline sold in California is made up of 90 percent petroleum-based gasoline (as specified by the California Air Resources Board [CARB]) and 10 percent ethanol. Diesel fuel is the second-largest transportation fuel used in California, representing 17 percent of total fuel sales behind gasoline. According to the California State Board of Equalization, in 2015 4.2 billion gallons of diesel, including off-road diesel, were sold (CEC 2023b). However, California has implemented a range of regulations and incentives to advance its clean transportation goals. Renewable diesel, a fuel made from fats and oils such as soybean oil or canola oil, is processed to be chemically the same as petroleum diesel and can be used as a replacement fuel or blended with any amount of petroleum diesel. The use of renewable diesel in California has increased substantially in recent years; as of June 30, 2021, renewable diesel had displaced 22 percent of petroleum-based diesel in California. This is in addition to the eight percent displaced by biodiesel and the four percent displaced by biomethane.

FIGURE 3.7-3. CALIFORNIA ENERGY USE BY SECTOR (2021)



Source: USEIA 2023a

3.7.6 PROJECT MEASURES

Project measures are design features, best management practices (BMPs), or other commitments that Metro would implement as part of all proposed alignments and stations, the design option, and the MSF to reduce or avoid environmental effects associated with project construction and operation.

Project measures are not the same as mitigation measures, which are used to reduce an environmental impact's significance level. Where applicable, project measures are discussed further in Section 3.7.7 as part of the evaluation of environmental impacts.

Construction and operation of the project would result in the release of criteria pollutants and GHG emissions. Section 3.3, Air Quality, describes project measures to limit release of these emissions and ensure all equipment operates at optimal manufacturer specifications. These project measures (PM AQ-1, PM AQ-3, and PM AQ-4) are also applicable to Section 3.7, Energy, since the analysis of energy resources is based on GHG emissions data. Measures to reduce GHG emissions include energy-efficiency actions that would also reduce energy consumption. Project measures PM AQ-1, PM AQ-3, and PM AQ-4 would apply to construction activities, while project measures PM AQ-3 and PM AQ-4 also would apply to operational activities. The following project measures would be applicable to impacts related to energy resources.

3.7.6.1 PM AQ-1: METRO GREEN CONSTRUCTION POLICY

Established by formal adoption of the Green Construction Policy in 2011, Metro commits to the following construction equipment requirements, construction best management practices (BMPs), and implementation strategies for all construction projects performed on Metro properties or rights-of-way (Metro 2011c):

- Construction equipment shall incorporate, where feasible, emissions-reducing technology such as hybrid drives and specific fuel economy standards.
- Equipment shall be maintained according to manufacturer specifications.
- Idling of construction equipment and heavy-duty trucks shall be restricted to a maximum of five minutes when not in use (certain exceptions apply based on CARB exemptions).
- Traffic speeds shall be limited on all unpaved roads to 15 miles per hour or less.
- All off-road diesel-powered construction equipment greater than 50 horsepower shall meet Tier 4 off-road emission standards at a minimum.
- All on-road heavy-duty trucks with a gross vehicle weight rating greater than or equal to 14,000 pounds shall have engines meeting U.S. 2010 on-road emission standards.
- Where applicable and feasible, coordination shall occur with local jurisdictions to improve traffic flow by signal synchronization during construction activities.
- Electric power shall be used in lieu of diesel power where available.
- Generators: Every effort shall be made to use grid-based electric power at any construction site, where feasible. Where access to the power grid is not available, on-site generators must:
  - Meet a 0.01 gram per brake-horsepower-hour standard for particulate matter; or
  - Be equipped with Best Available Control Technology for particulate matter emissions reductions.
- Inspections: Metro shall conduct inspections of construction sites and affected off-road and on-road equipment and generators as well as compliance with air quality rules.

- Records: Prior to Notice to Proceed to commence construction and to be verified afterward consistent with project contract requirements and through enforcement provisions above, the Contractor shall submit to Metro the following information for all construction equipment to be used on Metro properties or rights-of-way:
  - A certified statement that all construction equipment used conforms to the requirements specified above;
  - A list of all the equipment and vehicles (i.e., off-road equipment, include the CARB-issued Equipment Identification Number) to be used; and
  - A copy of each Contractor's certified U.S. Environmental Protection Agency rating and applicable paperwork issued either by CARB, SCAQMD, and any other jurisdiction that has oversight over the equipment.

3.7.6.2 PM AQ-3: METRO 2020 MOVING BEYOND SUSTAINABILITY STRATEGIC PLAN

Construction and operation of the project will adhere to the commitments established by the Metro Moving Beyond Sustainability Strategic Plan 2020, including, but not limited to, the application of renewable diesel requirements for contractors, the implementation of the Construction and Demolition Debris Policy, the identification of opportunities to decarbonize fuel sources at construction sites, the use of electric medium- and heavy-duty equipment during construction, and the design and build capital projects to CalGreen Tier 2 standards (Metro 2020).

3.7.6.3 PM AQ-4: METRO DESIGN STANDARDS

The project will be designed in accordance with the Metro Rail Design Criteria and the Metro Systemwide Station Design Standards Policy, which includes the installation of high-efficiency LED lighting in all fixtures to reduce electricity consumption (Metro 2017, 2018).

3.7.7 IMPACT EVALUATION AND MITIGATION MEASURES

This analysis presents the construction and operational impacts for energy resources, as well as any applicable mitigation measures associated with KNE. A summary of the impact conclusions and applicable mitigation measures is found in Table 3.7-17 in Section 3.7.7.4.

3.7.7.1 IMPACT ENG-1: ENERGY CONSUMPTION

Impact ENG-1: Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?

3.7.7.1.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.7.7.1.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Implementation of the KNE San Vicente–Fairfax Alignment would increase energy consumption for the duration of construction in the form of fossil fuel use associated

with transportation (e.g., gasoline, diesel fuel), including the transport and use of construction equipment (off-road), use of delivery and haul trucks (on-road), and use of passenger vehicles (on-road) by construction employees. Construction-related transportation energy consumption depends on the type and number of trips, VMT, fuel efficiency of vehicles, and travel mode. The use of fuel by on-road and off-road vehicles would be temporary and would fluctuate according to the subphase of construction. Construction fuel use for the alignment would cease upon completion of construction.

Table 3.7-2 presents the total fuel consumption anticipated for construction activities for the KNE San Vicente–Fairfax Alignment. The total fuel demand in gallons of gasoline and diesel is based on the carbon dioxide (CO_2) emissions calculations for proposed construction activities and application of the USEIA's CO_2 emissions coefficients (USEIA 2023b). For additional information related to the CO_2 emissions calculations, refer to Section 3.9, Greenhouse Gas Emissions.

TABLE 3.7-2. KNE SAN VICENTE–FAIRFAX ALIGNMENT CONSTRUCTION-RELATED ENERGY CONSUMPTION

	ENERGY CONSUMPTION (GALLONS OF FUEL; MMBTU)				
ENERGY SOURCE	SECTION 1	SECTION 2	SECTION 3	MSF	KNE SAN VICENTE–FAIRFAX ALIGNMENT TOTAL[1]
Off-Road Construction Equipment (gallons [diesel])	2,434,569	1,852,525	2,079,911	453,288	6,820,293
Truck Trips (Hauling, Delivery, Cement) (gallons [diesel])	1,176,776	847,898	1,286,247	120,905	3,431,826
Subtotal Fuel Consumption (gallons [diesel])	*3,611,345*	*2,700,424*	*3,366,158*	*574,193*	*10,252,119*
Worker Commute Trips (gallons [gasoline])	373,737	286,772	336,921	73,411	1,070,842
Subtotal Fuel Consumption (gallons [gasoline])	*373,737*	*286,772*	*336,921*	*73,411*	*1,070,842*
Total MMBTU	**545,083**	**408,505**	**506,645**	**88,415**	**1,548,648**

Source: Connect Los Angeles Partners 2023
[1]The MSF is an essential element in supporting the reliable operation of a light rail transit system and would be necessary for the implementation and operation of the KNE San Vicente–Fairfax Alignment. As such, energy consumption associated with MSF construction has been included in the alignment total.
Note: The KNE San Vicente–Fairfax Alignment would be constructed in three sections, referred to as Section 1, Section 2, and Section 3.
MMBtu = Million British thermal units; MSF = maintenance and storage facility

As shown in Table 3.7-2, total energy consumption for construction of the alignment (including transportation fuel use by off-road equipment, worker vehicle trips, and material delivery and haul truck trips) would be approximately 1,548,648 million British thermal units (MMBtu). Based on the anticipated sequential construction phasing of the alignment and stations and temporary nature of construction, the use of construction equipment that is less energy efficient than at comparable construction sites is not anticipated.

In addition, construction contractors would be required, in accordance with Metro's Green Construction Policy (project measure PM AQ-1), to minimize the idling time of construction equipment

by shutting equipment off when it is not in use or reducing the idling time to five minutes and maintaining equipment to manufacturers' specifications. These required practices limit wasteful and unnecessary energy consumption associated with the use of heavy-duty equipment during construction. Per Metro's Construction and Demolition Debris Recycling and Reuse Policy (project measure PM AQ-3), Metro would also give preference to recyclable and recycled products in the selection of construction materials and ensure that facilities used for disposal and recycling are complying with applicable federal, state, or local rules and regulations (Metro 2007b).

Energy consumption from construction activities would be temporary. While this analysis discloses an estimate of temporary construction-related energy demand, the long-term implications are more important for understanding the degree to which construction of the alignment and stations could result in wasteful or inefficient use of energy. As described in more detail below, the short-term energy-related energy consumption would facilitate a reduction in long-term demands. As a result, the energy demand associated with construction activities would not be wasteful or inefficient.

While the alignment and stations would require energy usage during temporary construction activities, energy consumption would be minimized by following Metro guidelines, which would avoid use of energy resources in a wasteful, inefficient, or unnecessary manner during construction. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.7.7.1.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE San Vicente–Fairfax Alignment would consume energy associated with electricity for light rail vehicle (LRV) propulsion and station operations, such as lighting, elevators/escalators, ventilation, and overhead contact systems. LRV propulsion and station operations were assumed to not use gasoline, diesel, or natural gas. This analysis also evaluated the regional transportation energy consumption for the 2045 future year to compare to the regional transportation energy consumption if KNE were not implemented (2045 without Project Conditions). The year 2045 is used as the future year for analysis purposes in order to facilitate consistency with other regional planning processes. Transportation fuel demand for the KNE San Vicente–Fairfax Alignment and the 2045 without Project Conditions were estimated based on the annual VMT in the SCAG region as provided by the transportation model (approximately 214,090,029,819 and 214,139,478,194 miles, respectively) and EMFAC2021 fleet mix data for SCAQMD in 2045. Fleet mix data for SCAQMD in 2045 includes conventional vehicles (gasoline or diesel-fueled vehicles) as well as alternative vehicle types, including electric and plug-in hybrid vehicles and vehicles fueled by compressed natural gas. Refer to Section 3.9, Greenhouse Gas Emissions, for additional information on annual VMT in the SCAG region.

Table 3.7-3 presents the energy consumption associated with operation of the alignment compared to the 2045 without Project Conditions. The table shows that the alignment and stations would reduce regional energy consumption from the 2045 without Project Conditions by 117,328 MMBtu in 2045. In addition, alignment and station operations would be electric-powered and any energy consumption from maintenance would be offset by long-term operation of KNE. Electricity providers in the region would also continue to use an increasing proportion of renewable energy sources in the electric power mix over time, pursuant to SB 100, thereby minimizing the indirect demand on energy resources. Stations would also be designed to meet Metro Design Standards (project measure PM AQ-4), which would require that they meet a number of conservation standards, including energy-efficient lighting, and per project measure PM AQ-3, comply with CalGreen and state energy standards under Title 24.

TABLE 3.7-3. KNE SAN VICENTE–FAIRFAX ALIGNMENT ANNUAL OPERATIONAL ENERGY CONSUMPTION

DESCRIPTION	GASOLINE DEMAND (GALLONS)	DIESEL DEMAND (GALLONS)	ELECTRICAL DEMAND (KWH)	NATURAL GAS DEMAND (GALLONS)	TOTAL OPERATIONAL ENERGY CONSUMPTION (MMBTU)
KNE San Vicente–Fairfax Alignment Regional Transportation Fuel Consumption	4,550,444,805	71,622,738	1,295,541,556	81,651	-
Light Rail Operations	-	-	4,409,586	-	-
Station Operations	-	-	675,648	-	-
KNE San Vicente–Fairfax Alignment Total Energy Consumption	**4,550,444,805**	**71,622,739**	**1,300,626,790**	**81,652**	**583,139,863**
2045 without Project Conditions, Regional Transportation Fuel Consumption	4,551,495,821	71,639,281	1,295,840,787	81,671	583,257,191
Net Energy Consumption	**(1,051,016)**	**(16,542)**	**4,786,003**	**(19)**	**(117,328)**

Source: Connect Los Angeles Partners 2023
kWh= kilowatt-hours; MMBtu = Million British thermal units

Furthermore, the alignment would ultimately facilitate a reduction in energy demand by providing a critical regional connection between major activity centers and areas of high population and employment density. Thus, the alignment and stations would reduce automobile VMT in the region, helping to achieve goals such as decreasing reliance on fossil fuels and decreasing overall per capita energy consumption for transportation, as identified in Appendix F of the CEQA Guidelines. Transportation is the largest energy-consuming sector in California, so projects that reduce transportation energy demand are particularly important in promoting energy conservation and other objectives embodied in Appendix F of the CEQA Guidelines. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.7.7.1.2 KNE FAIRFAX ALIGNMENT

3.7.7.1.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Implementation of the KNE Fairfax Alignment would increase energy consumption for the duration of construction in the form of fossil fuel use associated with transportation (e.g., gasoline, diesel fuel), including the transport and use of construction equipment (off-road), use of delivery and haul trucks (on-road), and use of passenger vehicles (on-road) by construction employees. Construction-related transportation energy consumption depends on the type and number of trips, VMT, fuel efficiency of vehicles, and travel mode. The use of fuel by on-road and off-road vehicles would be temporary and would fluctuate according to the subphase of construction. Construction fuel use for the alignment would cease upon completion of construction.

Table 3.7-4 presents the total fuel consumption anticipated for construction activities for the KNE Fairfax Alignment. The total fuel demand in gallons of gasoline and diesel is based on the CO_2 emissions calculations for proposed construction activities and application of the USEIA's CO_2 emissions coefficients (USEIA 2023b). For additional information related to the CO_2 emissions calculations, refer to Section 3.9, Greenhouse Gas Emissions.

TABLE 3.7-4. KNE FAIRFAX ALIGNMENT CONSTRUCTION-RELATED ENERGY CONSUMPTION

ENERGY SOURCE	ENERGY CONSUMPTION (GALLONS OF FUEL; MMBTU)			
	SECTION 1	SECTION 2	MSF	KNE FAIRFAX ALIGNMENT TOTAL[1]
Off-Road Construction Equipment (gallons [diesel])	2,434,569	2,479,902	453,288	5,367,759
Truck Trips (Hauling, Delivery, Cement) (gallons [diesel])	1,176,776	1,558,919	123,263	2,858,959
Subtotal Fuel Consumption (gallons [diesel])	*3,611,345*	*4,038,822*	*576,551*	*8,226,718*
Worker Commute Trips (gallons [gasoline])	373,737	405,585	72,570	851,892
Subtotal Fuel Consumption (gallons [gasoline])	*373,737*	*405,585*	*72,570*	*851,892*
Total MMBTU	**545,083**	**608,055**	**88,635**	**1,241,774**

Source: Connect Los Angeles Partners 2023
[1]The MSF is an essential element in supporting the reliable operation of a light rail transit system and would be necessary for the implementation and operation of the KNE Fairfax Alignment. As such, energy consumption associated with MSF construction has been included in the alignment total.
Note: The KNE Fairfax Alignment would be constructed in two sections, referred to as Section 1 and Section 2.
MMBtu = Million British thermal units; MSF = maintenance and storage facility

As shown in Table 3.7-4, total energy consumption for construction of the alignment (including transportation fuel use by off-road equipment, worker vehicle trips, and material delivery and haul truck trips) would be approximately 1,241,774 MMBtu. Based on the anticipated sequential construction phasing of the alignment and stations and temporary nature of construction, the use of construction equipment that is less energy efficient than at comparable construction sites is not anticipated.

In addition, construction contractors would be required, in accordance with Metro's Green Construction Policy (project measure PM AQ-1), to minimize the idling time of construction equipment by shutting equipment off when it is not in use or reducing the idling time to five minutes and maintaining equipment to manufacturers' specifications. These required practices limit wasteful and unnecessary energy consumption associated with the use of heavy-duty equipment during construction. Per Metro's Construction and Demolition Debris Recycling and Reuse Policy (project measure PM AQ-3), Metro would also give preference to recyclable and recycled products in the selection of construction materials and ensure that facilities used for disposal and recycling are complying with applicable federal, state, or local rules and regulations (Metro 2007b).

Energy consumption from construction activities would be temporary. While this analysis discloses an estimate of temporary construction-related energy demand, the long-term implications are more important for understanding the degree to which construction of the alignment and stations could result in wasteful or inefficient use of energy. As described in more detail below, the short-term energy-related energy consumption would facilitate a reduction in long-term demands. As a result, the energy demand associated with construction activities would not be wasteful or inefficient.

While the alignment and stations would require energy usage during temporary construction activities, energy consumption would be minimized by following Metro guidelines, which would avoid use of energy resources in a wasteful, inefficient, or unnecessary manner during construction. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.7.7.1.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE Fairfax Alignment would consume energy associated with electricity for LRV propulsion and station operations, such as lighting, elevators/escalators, ventilation, overhead catenary systems, etc. LRV propulsion and station operations were assumed to not use gasoline, diesel, or natural gas. This analysis also evaluated the regional transportation energy consumption of a 2045 future year to compare to the regional transportation energy consumption if the project were not implemented (2045 without Project Conditions). Transportation fuel demand for the KNE Fairfax Alignment and the 2045 without Project Conditions were estimated based on the annual VMT in the SCAG region as provided by the transportation model (approximately 214,092,959,309 and 214,139,478,194 miles, respectively) and EMFAC2021 fleet mix data for SCAQMD in 2045. Fleet mix data for SCAQMD in 2045 includes conventional vehicles (gasoline or diesel-fueled vehicles) as well as alternative vehicle types, including electric and plug-in hybrid vehicles and vehicles fueled by compressed natural gas. Refer to Section 3.9, Greenhouse Gas Emissions, for additional information on annual VMT in the SCAG region.

Table 3.7-5 presents the energy consumption associated with operation of the KNE Fairfax Alignment compared to the 2045 without Project Conditions. The table shows that the alignment and stations would reduce regional energy consumption from the 2045 without Project Conditions by 112,809 MMBtu in 2045. In addition, alignment and station operations would be electric-powered and any energy consumption from maintenance would be offset by long-term operation of the project. Electricity providers in the region would also continue to use an increasing proportion of renewable

energy sources in the electric power mix over time pursuant to SB 100, thereby minimizing the indirect demand on energy resources. The stations that are part of the KNE Fairfax Alignment would also be designed to meet Metro Design Standards per project measure PM AQ-4, which would require that stations meet a number of conservation standards, including energy-efficient lighting, and per project measure PM AQ-3, comply with CalGreen and state energy standards under Title 24.

TABLE 3.7-5. KNE FAIRFAX ALIGNMENT ANNUAL OPERATIONAL ENERGY CONSUMPTION

DESCRIPTION	GASOLINE DEMAND (GALLONS)	DIESEL DEMAND (GALLONS)	ELECTRICAL DEMAND (KWH)	NATURAL GAS DEMAND (GALLONS)	TOTAL OPERATIONAL ENERGY CONSUMPTION (MMBtu)
KNE Fairfax Alignment Regional Transportation-Related Fuel Consumption	4,550,507,070	71,623,719	1,295,559,283	81,653	-
Light Rail Operations	-	-	3,545,853	-	-
Station Operations	-	-	525,504	-	-
KNE Fairfax Alignment Total Energy Consumption	**4,550,507,070**	**71,623,719**	**1,299,630,640**	**81,653**	**583,144,382**
2045 without Project Conditions, Regional Transportation Fuel Consumption	4,551,495,821	71,639,281	1,295,840,787	81,671	583,257,191
Net Energy Consumption	(988,751)	(15,562)	3,789,853	(18)	(112,809)

Source: Connect Los Angeles Partners 2023
kWh= kilowatt-hours; MMBtu = Million British thermal units

Furthermore, the KNE Fairfax Alignment would facilitate a reduction in energy demand by providing a critical regional connection between major activity centers and areas of high population and employment density. Thus, the KNE Fairfax Alignment would reduce automobile VMT in the region, helping to achieve goals such as decreasing reliance on fossil fuels and decreasing overall per capita energy consumption for transportation, as identified in Appendix F of the CEQA Guidelines. Transportation is the largest energy-consuming sector in California, so projects that reduce transportation energy demand are particularly important in promoting energy conservation and other objectives embodied in Appendix F of the CEQA Guidelines. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.7.7.1.3 KNE LA BREA ALIGNMENT

3.7.7.1.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Implementation of the KNE La Brea Alignment would increase energy consumption for the duration of construction in the form of fossil fuel use associated with transportation (e.g., gasoline, diesel fuel), including the transport and use of construction equipment (off-road), use of delivery and haul trucks (on-road), and use of passenger vehicles (on-road) by

construction employees. Construction-related transportation energy consumption depends on the type and number of trips, VMT, fuel efficiency of vehicles, and travel mode. The use of fuel by on-road and off-road vehicles would be temporary and would fluctuate according to the subphase of construction. Construction fuel use for the alignment would cease upon completion of construction.

Table 3.7-6 presents the total fuel consumption anticipated for construction activities for the KNE La Brea Alignment. The total fuel demand in gallons of gasoline and diesel is based on the CO_2 emissions calculations for proposed construction activities and application of the USEIA's CO_2 emissions coefficients (USEIA 2023b). For additional information related to the CO_2 emissions calculations, refer to Section 3.9, Greenhouse Gas Emissions.

TABLE 3.7-6. KNE LA BREA ALIGNMENT CONSTRUCTION-RELATED ENERGY CONSUMPTION

ENERGY SOURCE	ENERGY CONSUMPTION (GALLONS OF FUEL; MMBTU)			
	SECTION 1	SECTION 2	MSF	KNE LA BREA ALIGNMENT TOTAL[1]
Off-Road Construction Equipment (gallons [diesel])	2,278,285	1,991,219	448,371	4,717,875
Truck Trips (Hauling, Delivery, Cement) (gallons [diesel])	1,046,445	1,255,317	122,829	2,424,591
Subtotal Fuel Consumption (gallons [diesel])	*3,324,730*	*3,246,536*	*571,200*	*7,142,466*
Worker Commute Trips (gallons [gasoline])	353,586	313,552	68,615	735,753
Subtotal Fuel Consumption (gallons [gasoline])	*353,586*	*313,552*	*68,615*	*735,753*
Total MMBTU	503,011	487,216	87,402	1,077,629

Source: Connect Los Angeles Partners 2023
[1]The MSF is an essential element in supporting the reliable operation of a light rail transit system and would be necessary for the implementation and operation of the KNE La Brea Alignment. As such, energy consumption associated with MSF construction has been included in the alignment total.
Note: The KNE La Brea Alignment would be constructed in two sections, referred to as Section 1 and Section 2.
MMBtu = Million British thermal units; MSF = maintenance and storage facility

As shown in Table 3.7-6, total energy consumption for construction of the alignment (including transportation fuel use by off-road equipment, worker vehicle trips, and material delivery and haul truck trips) would be approximately 1,077,629 MMBtu. Based on the anticipated sequential construction phasing of the alignment and stations and temporary nature of construction, the use of construction equipment that is less energy efficient than at comparable construction sites is not anticipated.

In addition, construction contractors would be required, in accordance with Metro's Green Construction Policy (project measure PM AQ-1), to minimize the idling time of construction equipment by shutting equipment off when it is not in use or reducing the idling time to five minutes and maintaining equipment to manufacturers' specifications. These required practices limit wasteful and unnecessary energy consumption associated with the use of heavy-duty equipment during construction. Per Metro's Construction and Demolition Debris Recycling and Reuse Policy (project measure PM AQ-3), Metro would also give preference to recyclable and recycled products in the

selection of construction materials and ensure that facilities used for disposal and recycling are complying with applicable federal, state, or local rules and regulations (Metro 2007b).

Energy consumption from construction activities would be temporary. While this analysis discloses an estimate of temporary construction-related energy demand, the long-term implications are more important for understanding the degree to which construction of the alignment and stations could result in wasteful or inefficient use of energy. As described in more detail below, the short-term energy-related energy consumption would facilitate a reduction in long-term demands. As a result, the energy demand associated with construction activities would not be wasteful or inefficient.

While the alignment and stations would require energy usage during temporary construction activities, energy consumption would be minimized by following Metro guidelines, which would avoid use of energy resources in a wasteful, inefficient, or unnecessary manner during construction. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.7.7.1.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE La Brea Alignment would consume energy associated with electricity for LRV propulsion and station operations, such as lighting, elevators/escalators, ventilation, overhead catenary systems, etc. LRV propulsion and station operations were assumed to not use gasoline, diesel, or natural gas. This analysis also evaluated the regional transportation energy consumption of a 2045 future year to compare to the regional transportation energy consumption if the project were not implemented (2045 without Project Conditions). Transportation fuel demand for the KNE La Brea Alignment and the 2045 without Project Conditions were estimated based on the annual VMT in the SCAG region as provided by the transportation model (approximately 214,090,021,424 and 214,139,478,194 miles, respectively) and EMFAC2021 fleet mix data for SCAQMD in 2045. Fleet mix data for SCAQMD in 2045 includes conventional vehicles (gasoline or diesel-fueled vehicles) as well as alternative vehicle types, including electric and plug-in hybrid vehicles and vehicles fueled by compressed natural gas. Refer to Section 3.9, Greenhouse Gas Emissions, for additional information on annual VMT in the SCAG region.

Table 3.7-7 presents the energy consumption associated with operation of the KNE La Brea Alignment compared to the 2045 without Project Conditions. The table shows that the alignment and stations would reduce regional energy consumption from the 2045 without Project Conditions by 123,550 MMBtu in 2045. In addition, alignment and station operations would be electric-powered and any energy consumption from maintenance would be offset by long-term operation of the project. Electricity providers in the region would also continue to use an increasing proportion of renewable energy sources in the electric power mix over time pursuant to SB 100, thereby minimizing the indirect demand on energy resources. The stations that are part of the KNE La Brea Alignment would also be designed to meet Metro Design Standards per project measure PM AQ-4, which would require that stations meet a number of conservation standards, including energy-efficient lighting, and per project measure PM AQ-3, comply with CalGreen and state energy standards under Title 24.

TABLE 3.7-7. KNE LA BREA ALIGNMENT ANNUAL OPERATIONAL ENERGY CONSUMPTION

DESCRIPTION	GASOLINE DEMAND (GALLONS)	DIESEL DEMAND (GALLONS)	ELECTRICAL DEMAND (KWH)	NATURAL GAS DEMAND (GALLONS)	TOTAL OPERATIONAL ENERGY CONSUMPTION (MMBtu)
KNE La Brea Alignment Regional Transportation Fuel Consumption	4,550,444,626	71,622,736	1,295,541,505	81,652	-
Light Rail Operations	-	-	2,818,498	-	-
Station Operations	-	-	450,432	-	-
KNE La Brea Alignment Total Energy Consumption	4,550,444,626	71,622,736	1,298,810,435	81,652	583,133,641
2045 without Project Conditions, Regional Transportation Fuel Consumption	4,551,495,821	71,639,281	1,295,840,787	81,671	583,257,191
Net Energy Consumption	(1,051,195)	(16,545)	2,969,648	(19)	(123,550)

Source: Connect Los Angeles Partners 2023
kWh= kilowatt-hours; MMBtu = Million British thermal units

Furthermore, the KNE La Brea Alignment would facilitate a reduction in energy demand by providing a critical regional connection between major activity centers and areas of high population and employment density. Thus, the KNE La Brea Alignment would reduce automobile VMT in the region, helping to achieve goals such as decreasing reliance on fossil fuels and decreasing overall per capita energy consumption for transportation, as identified in Appendix F of the CEQA Guidelines. Transportation is the largest energy-consuming sector in California, so projects that reduce transportation energy demand are particularly important in promoting energy conservation and other objectives embodied in Appendix F of the CEQA Guidelines. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.7.7.1.4 HOLLYWOOD BOWL DESIGN OPTION

3.7.7.1.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the Hollywood Bowl Design Option would also employ sequential excavation method construction rather than the tunnel boring machine construction used for the alignments, but this would still result in consumption of similar energy resources as the alignments and stations. Construction-related energy sources associated with the design option would include diesel and gasoline fuel for the transport and use of construction equipment (off-road), use of delivery and haul trucks (on-road), and use of passenger vehicles (on-road) by construction employees. Table 3.7-8, Table 3.7-9 and Table 3.7-10 present the total fuel consumption anticipated for construction activities for the design option with the KNE San Vicente–Fairfax Alignment, KNE Fairfax Alignment, and KNE La Brea Alignment, respectively.

TABLE 3.7-8. KNE SAN VICENTE–FAIRFAX ALIGNMENT WITH HOLLYWOOD BOWL DESIGN OPTION CONSTRUCTION-RELATED ENERGY CONSUMPTION

ENERGY SOURCE	ENERGY CONSUMPTION (GALLONS OF FUEL; MMBTU)				
	SECTION 1	SECTION 2	SECTION 3	MSF	KNE SAN VICENTE–FAIRFAX ALIGNMENT TOTAL[1]
Off-Road Construction Equipment (gallons [diesel])	2,434,569	1,852,525	4,032,033	453,288	8,772,414
Truck Trips (Hauling, Delivery, Cement) (gallons [diesel])	1,176,776	847,898	1,301,704	120,905	3,447,283
Subtotal Fuel Consumption (gallons [diesel])	*3,611,345*	*2,700,424*	*5,333,737*	*574,193*	*12,219,698*
Worker Commute Trips (gallons [gasoline])	373,737	286,772	532,244	73,411	1,266,165
Subtotal Fuel Consumption (gallons [gasoline])	*373,737*	*286,772*	*532,244*	*73,411*	*1,266,165*
Total MMBTU	**545,083**	**408,505**	**802,586**	**88,415**	**1,844,589**

Source: Connect Los Angeles Partners 2023
[1]The MSF is an essential element in supporting the reliable operation of a light rail transit system and would be necessary for the implementation and operation of the Hollywood Bowl Design Option as part of the alignment. As such, energy consumption associated with MSF construction has been included in the alignment total.
Note: The KNE San Vicente–Fairfax Alignment would be constructed in three sections, referred to as Section 1, Section 2, and Section 3.
MMBtu = Million British thermal units; MSF = maintenance and storage facility

TABLE 3.7-9. KNE FAIRFAX ALIGNMENT WITH HOLLYWOOD BOWL DESIGN OPTION CONSTRUCTION-RELATED ENERGY CONSUMPTION

ENERGY SOURCE	ENERGY CONSUMPTION (GALLONS OF FUEL; MMBTU)			
	SECTION 1	SECTION 2	MSF	KNE FAIRFAX ALIGNMENT TOTAL[1]
Off-Road Construction Equipment (gallons [diesel])	2,434,569	4,397,808	453,288	7,285,665
Truck Trips (Hauling, Delivery, Cement) (gallons [diesel])	1,176,776	1,574,499	121,992	2,873,267
Subtotal Fuel Consumption (gallons [diesel])	*3,611,345*	*5,972,308*	*575,279*	*10,158,932*
Worker Commute Trips (gallons [gasoline])	373,737	598,685	71,144	1,043,567
Subtotal Fuel Consumption (gallons [gasoline])	*373,737*	*598,685*	*71,144*	*1,043,567*
Total MMBTU	**545,083**	**899,014**	**88,282**	**1,532,378**

Source: Connect Los Angeles Partners 2023
[1]The MSF is an essential element in supporting the reliable operation of a light rail transit system and would be necessary for the implementation and operation of the Hollywood Bowl Design Option as part of the alignment. As such, energy consumption associated with MSF construction has been included in the alignment total.
Note: The KNE Fairfax Alignment would be constructed in two sections, referred to as Section 1 and Section 2.
MMBtu = Million British thermal units; MSF = maintenance and storage facility

TABLE 3.7-10. KNE LA BREA ALIGNMENT WITH HOLLYWOOD BOWL DESIGN OPTION CONSTRUCTION-RELATED ENERGY CONSUMPTION

ENERGY SOURCE	ENERGY CONSUMPTION (GALLONS OF FUEL; MMBTU)			
	SECTION 1	SECTION 2	MSF	KNE LA BREA ALIGNMENT TOTAL[1]
Off-Road Construction Equipment (gallons [diesel])	2,278,285	3,958,086	448,371	6,684,742
Truck Trips (Hauling, Delivery, Cement) (gallons [diesel])	1,046,445	1,271,923	121,557	2,439,925
Subtotal Fuel Consumption (gallons [diesel])	*3,324,730*	*5,230,009*	*569,928*	*9,124,668*
Worker Commute Trips (gallons [gasoline])	353,586	524,426	70,930	948,942
Subtotal Fuel Consumption (gallons [gasoline])	*353,586*	*524,426*	*70,930*	*948,942*
Total MMBTU	**503,011**	**787,294**	**87,516**	**1,377,822**

Source: Connect Los Angeles Partners 2023
[1]The MSF is an essential element in supporting the reliable operation of a light rail transit system and would be necessary for the implementation and operation of the Hollywood Bowl Design Option as part of the alignment. As such, energy consumption associated with MSF construction has been included in the alignment total.
Note: The KNE La Brea Alignment would be constructed in two sections, referred to as Section 1 and Section 2.
MMBtu = Million British thermal units; MSF = maintenance and storage facility

Construction of the design option would be temporary and energy consumption would fluctuate according to the subphase of construction. Construction contractors would be required to implement the practices described above for the alignments and stations. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.7.7.1.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the Hollywood Bowl Design Option would consume additional electricity for LRV propulsion and for operation of one additional station, beyond that described for the alignments. LRV propulsion and station operations were assumed to not use gasoline, diesel, or natural gas. The annual energy consumption associated with operation of the design option is provided in Table 3.7-11. A summary of the operational energy consumption for the three alignments with the Hollywood Bowl Design Option is shown in Table 3.7-15.

TABLE 3.7-11. HOLLYWOOD BOWL DESIGN OPTION ANNUAL OPERATIONAL ENERGY CONSUMPTION

DESCRIPTION	ELECTRICAL DEMAND (KWH)	TOTAL OPERATIONAL ENERGY DEMAND (MMBtu)
Light Rail Operations	454,596	1,552
Station Operations	75,072	256
Total Energy Consumption	529,668	1,808

Source: Connect Los Angeles Partners 2023
kWh= kilowatt-hours; MMBtu = Million British thermal units

As shown in Table 3.7-11, operation of the design option would result in approximately 1,808 additional MMBtu per year. However, the design option would only be implemented with an alignment to increase rider connectivity as part of KNE, resulting in an overall net reduction in regional energy consumption due to the reduced VMT in the region (see Table 3.7-15, which demonstrates that KNE would reduce up to 123,550 MMBtu). After accounting for the additional energy consumption required to operate the design option, KNE would still result in a reduction of 121,742 MMBtu. As discussed in Section 3.16, Transportation, implementation of the Hollywood Bowl Design Option would result in a small reduction in VMT in the region and there would be no significant annual operational consumption of gasoline, diesel, or natural gas. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.7.7.1.5 MAINTENANCE AND STORAGE FACILITY

3.7.7.1.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the MSF would result in consumption of similar types of energy resources as described for the alignments. Construction-related energy sources associated with the MSF would include diesel and gasoline fuel for the transport and use of construction equipment (off-road), use of delivery and haul trucks (on-road), and use of passenger vehicles (on-road) by construction employees. Construction-related transportation energy consumption depends on the type and number of trips, VMT, fuel efficiency of vehicles, and travel mode. The use of fuel by on-road and off-road vehicles would be temporary and would fluctuate according to the subphase of construction.

Construction of the MSF would occur concurrently with Section 1 and Section 2 of each alignment. Concurrently with Section 1 of the alignments, MSF facility construction would include the addition of four storage tracks on the existing Division 16 site to accommodate increased LRV storage. Concurrently with Section 2 of the alignments, MSF facilities constructed would include expansion of the existing Division 16 MSF on the adjacent 16.5-acre site and comprise approximately 57,380 square feet of facility structures. No MSF construction would occur as part of Section 3 of the KNE San Vicente–Fairfax Alignment because the MSF would be completed as part of Section 2. Table 3.7-12 presents the total fuel consumption anticipated for proposed construction activities for the MSF depending on the alignment selected.

Construction of the MSF would be temporary. Fuel use related to construction would cease upon completion of construction. Construction contractors would be required to implement the same required practices described above for the alignments and stations. Therefore, the MSF would have a less than significant impact during construction.

TABLE 3.7-12. MSF AND KNE ALIGNMENTS CONSTRUCTION-RELATED ENERGY CONSUMPTION

	ENERGY CONSUMPTION (GALLONS OF FUEL; MMBTU)								
	KNE SAN VICENTE–FAIRFAX ALIGNMENT			KNE FAIRFAX ALIGNMENT			KNE LA BREA ALIGNMENT		
EMISSION SOURCE	SECTION 1 MSF FACILITIES[1]	SECTION 2 MSF EXPANSION[2]	ALIGNMENT WITH MSF[3]	SECTION 1 MSF FACILITIES[1]	SECTION 2 MSF EXPANSION[2]	ALIGNMENT WITH MSF[3]	SECTION 1 MSF FACILITIES[1]	SECTION 2 MSF EXPANSION[2]	ALIGNMENT WITH MSF[3]
Off-Road Construction Equipment (gallons [diesel])	52,785	400,503	6,820,293	52,785	400,503	5,367,759	47,868	400,503	4,717,875
Truck Trips (Hauling, Delivery, Cement) (gallons [diesel])	12,490	108,415	3,431,826	12,490	110,773	2,858,959	12,055	110,773	2,424,591
Subtotal Fuel Consumption (gallons [diesel])	*65,275*	*508,918*	*10,252,119*	*65,275*	*511,276*	*8,226,718*	*59,924*	*511,276*	*7,142,466*
Worker Commute Trips (gallons [gasoline])	13,578	59,834	1,070,842	13,578	58,992	851,892	10,872	57,743	735,753
Subtotal Fuel Consumption (gallons [gasoline])	*13,578*	*59,834*	*1,070,842*	*13,578*	*58,992*	*851,892*	*10,872*	*57,743*	*735,753*
Total MMBTU	**10,705**	**77,710**	**1,548,648**	**10,705**	**77,930**	**1,241,774**	**9,628**	**77,774**	**1,077,629**

Source: Connect Los Angeles Partners 2023
[1] Section 1 MSF Facilities = the additional four storage tracks required to support operation of Section 1 of the alignment.
[2] Section 2 MSF Expansion = full expansion of the Division 16 site
[3]The MSF is an essential element in supporting the reliable operation of a light rail transit system and would be necessary for the implementation and operation of any KNE alignment. As such, energy consumption associated with MSF construction has been presented with alignment energy totals.
Note: As discussed in Section 2.4.6, Construction Sections, of Chapter 2, KNE would be constructed in either two sections (for the KNE Fairfax and La Brea Alignments) or three sections (for the KNE San Vicente–Fairfax Alignments), referred to as Section 1, Section 2, and Section 3. Together these comprise KNE.
MMBtu = Million British thermal units; MSF = maintenance and storage facility

3.7.7.1.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the MSF would consume additional electricity beyond that described for the alignments and stations and the design option. The MSF would consume electricity for lighting, ventilation, radio and telecommunications, and operations and maintenance equipment, as well as natural gas for space and water heating (which is not required for operation of the alignments and stations and the design option). In addition, water use associated with the MSF would result in indirect electricity consumption associated with the energy required to supply, treat, and distribute water to the South Coast region. The annual energy consumption associated with operation of the MSF expansion at Metro's Division 16 (buildout of MSF, which would be constructed concurrent with Section 2 of the alignments) is provided in Table 3.7-13.

TABLE 3.7-13. MSF ANNUAL OPERATIONAL ENERGY CONSUMPTION

DESCRIPTION	ENERGY DEMAND
Electricity Consumption (kWh/year)[1]	310,088
Natural Gas Consumption (kBtu)	49,347
Total Energy Consumption (MMBtu)[2]	1,108

Source: Connect Los Angeles Partners 2023
[1] Electricity consumption includes the indirect electricity demand associated with the electricity required to supply, treat, and distribute water.
[2] Total energy consumption presented in Million British thermal units. Electricity consumption in kilowatt-hours and natural gas consumption in thousand British thermal units has been converted to a single unit of measure.
kWh= kilowatt-hours; kBtu = thousand British thermal units; MMBtu = Million British thermal units

As shown in Table 3.7-13, operation of the MSF would result in approximately 1,108 additional MMBtu per year. Operation of the MSF would comply with applicable regulations, including CalGreen and state energy standards under Title 24 per project measures PM AQ-3 and PM AQ-4, which would require that the MSF meet a number of conservation standards, including installation of water-efficient fixtures and energy-efficient lighting and appliances. Furthermore, the MSF would allow for the additional light rail operations under any of the alignments, therefore providing for the regional VMT and related transportation energy reduction benefit provided by KNE. Therefore, the MSF would have a less than significant impact during operation.

3.7.7.1.6 SUMMARY OF KNE ENERGY CONSUMPTION

3.7.7.1.6.1 CONSTRUCTION IMPACTS

For comparative purposes, Table 3.7-14 summarizes the construction-related energy consumption for all alignments and stations, design option, and MSF. The construction-related energy consumption accounts for construction equipment, haul trucks, delivery trucks, cement trucks, and worker commutes.

TABLE 3.7-14. KNE CONSTRUCTION-RELATED ENERGY CONSUMPTION SUMMARY

DESCRIPTION	SECTION	TOTAL ENERGY CONSUMPTION (MMBTU)
ALIGNMENT AND MSF[1]		
KNE San Vicente–Fairfax Alignment	Section 1	545,083
	Section 2	408,505
	Section 3	506,645
	MSF	88,415
KNE Fairfax Alignment	Section 1	545,083
	Section 2	608,055
	MSF	88,635
KNE La Brea Alignment	Section 1	503,011
	Section 2	487,216
	MSF	87,402
ALIGNMENT, MSF, AND DESIGN OPTION[1]		
KNE San Vicente–Fairfax Alignment and Hollywood Bowl Design Option	Section 1	545,083
	Section 2	408,505
	Section 3	802,586
	MSF	88,415
KNE Fairfax Alignment and Hollywood Bowl Design Option	Section 1	545,083
	Section 2	899,014
	MSF	88,282
KNE La Brea Alignment and Hollywood Bowl Design Option	Section 1	503,011
	Section 2	787,294
	MSF	87,516

Source: Connect Los Angeles Partners 2023
[1]The MSF is an essential element in supporting the reliable operation of a light rail transit system and would be necessary for the implementation and operation of any alignment. As such, energy consumption associated with MSF construction has been presented with alignment energy totals.
Note: As discussed in Section 2.4.6, Construction Sections, of Chapter 2, KNE would be constructed in either two sections (for the KNE Fairfax and La Brea Alignments) or three sections (for the KNE San Vicente–Fairfax Alignment), referred to as Section 1, Section 2, and Section 3. Together these comprise KNE.
MMBtu = Million British thermal units; MSF = maintenance and storage facility

3.7.7.1.6.2 OPERATIONAL IMPACTS

For comparative purposes, Table 3.7-15 summarizes the regional operational-related energy consumption for all alignments and stations, design option, and MSF. The operational-related energy consumption accounts for the total annual regional energy consumption. As shown in Table 3.7-15, implementation of KNE would result in a net energy reduction.

TABLE 3.7-15. KNE ANNUAL OPERATIONAL TOTAL ENERGY CONSUMPTION SUMMARY

ALIGNMENT	GASOLINE DEMAND (GALLONS)	DIESEL DEMAND (GALLONS)	ELECTRICAL DEMAND (KWH)	NATURAL GAS DEMAND (GALLONS)	TOTAL OPERATIONAL ENERGY CONSUMPTION (MMBTU)	2045 WITHOUT PROJECT CONDITIONS, REGIONAL TRANSPORTATION FUEL CONSUMPTION	NET ENERGY CONSUMPTION
KNE San Vicente–Fairfax Alignment[1]	4,550,444,805	71,622,739	1,300,626,790	81,652	583,139,863	583,257,191	**(117,328)**
KNE Fairfax Alignment[1]	4,550,507,070	71,623,719	1,299,630,640	81,653	583,144,382	583,257,191	**(112,809)**
KNE La Brea Alignment[1]	4,550,444,626	71,622,736	1,298,810,435	81,652	583,133,641	583,257,191	**(123,550)**
Hollywood Bowl Design Option	N/A	N/A	529,668	N/A	1,808	-	-
MSF	N/A	N/A	310,088	49,347	1,108	-	-

Source: Connect Los Angeles Partners 2023

[1] The energy consumption shown for each alignment includes the regional transportation energy consumption (e.g., gasoline, diesel, and electrical demand associated with annual VMT in the SCAG region) in the 2045 future year to compare to the regional transportation energy consumption if the project were not implemented (2045 without Project Conditions).

kWh= kilowatt-hours; MMBtu = Million British thermal units; MSF = maintenance and storage facility; N/A = not applicable

3.7.7.2 IMPACT ENG-2: RENEWABLE ENERGY AND ENERGY EFFICIENCY

Impact ENG-2: Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

3.7.7.2.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.7.7.2.1.1 CONSTRUCTION IMPACTS

No Impact. As described under Impact ENG-1, the KNE San Vicente–Fairfax Alignment would increase energy consumption for the duration of construction. However, the alignment would comply with Metro's Green Construction Policy per project measure PM AQ-1, adhere to commitments established by the Moving Beyond Sustainability Strategic Plan 2020 per project measure PM AQ-3, and conform with Metro's Rail Design Criteria and Metro's Systemwide Station Design Standards Policy per project measure PM AQ-4. This would ensure consistency with the purpose and goals included in state and local energy plans and policies described in Table 3.7-16 and Section 3.7.2 to reduce energy consumption during construction activities.

By adhering to these plans and policies, construction of the alignment would not conflict with or obstruct state or local plans for renewable energy or energy efficiency. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during construction.

TABLE 3.7-16. CONSISTENCY WITH PLANS AND POLICIES

PLANNING AGENCY OR JURISDICTION	ADOPTED PLAN	DESCRIPTION OF PLAN	CONSISTENCY WITH PLANS AND POLICES
State of California	AB 1007, Alternative Fuels Plan	AB 1007 (Pavley, Chapter 371, Statutes of 2005) requires the California Energy Commission to prepare an alternative fuels plan to increase the use of alternative fuels in California. The State Alternative Fuels Plan aims to clean the state's air, diversify fuel sources, and protect the state from oil spikes that affect prices, the economy, and jobs. The State Alternative Fuels Plan focuses on transportation fuels and alternative fuels but recognizes other components of the transportation system, including advanced vehicle technology and efficiency improvements in conventional vehicles. Additionally, the plan indicates that significant efforts would be needed to reduce VMT by all Californians through more effective land use and transportation planning and greater mass movement of people and goods.	The KNE San Vicente–Fairfax, Fairfax, and La Brea Alignments, as well as the Hollywood Bowl Design Option and MSF, would not conflict with the policy mechanisms set forth by the Alternative Fuels Plan and would support aspects of the Plan's goals, including reducing VMT, by all Californians through more effective land use and transportation planning and greater mass movement of people.
State of California	EO B-16-12	EO B-16-12 advances two long-term environmental and energy goals for the transportation section: (1) decrease transportation section GHG emissions to 80 percent below 1990 levels by 2050 and (2) reduce at least 1.5 billion gallons of petroleum fuels by 2025 through the use of clean and efficient vehicles.	The KNE San Vicente–Fairfax, Fairfax, and La Brea Alignments, as well as the Hollywood Bowl Design Option and MSF, would not conflict with the provisions or policy mechanisms set forth by EO B-16-12. KNE would support the Executive Order by decreasing the use of petroleum fuels and therefore GHG emissions in the transportation sector.
State of California	SB 1078, 350, and 100	In December 2021, SB 100 increased the renewable electricity procurement goal set by SB 350 from 50 percent to 60 percent by 2030 with new interim targets of 44 percent by 2024 and 52 percent by 2027. Additionally, SB 100 requires renewable energy and zero-carbon electricity system to supply 100 percent of electric retail sales by 2045.	The KNE San Vicente–Fairfax, Fairfax, and La Brea Alignments, as well as the Hollywood Bowl Design Option and MSF, would not conflict with electricity providers from increasing renewable electricity procurement.
State of California	EO N-79-20	California shall transition to 100 percent zero-emission off-road vehicles and equipment by 2035 where feasible.	The KNE San Vicente–Fairfax, Fairfax, and La Brea Alignments, as well as the Hollywood Bowl Design Option and MSF, would not conflict with the provisions set forth by EO N-79-20 that would transition zero-emission off-road vehicles and equipment by 2035 where feasible.

PLANNING AGENCY OR JURISDICTION	ADOPTED PLAN	DESCRIPTION OF PLAN	CONSISTENCY WITH PLANS AND POLICES
SCAG	2020-2045 SCAG RTP/SCS	The RTP provides a long-range regional vision for regional transportation goals and policies, as well as predicted transportation challenges and the region's future transportation strategy. The RTP/SCS establishes the following goal that relates to the project and energy efficiency and conservation: • Actively encourage and create incentives for energy efficiency, where possible.	The KNE San Vicente–Fairfax, Fairfax, and La Brea Alignments, as well as the Hollywood Bowl Design Option and MSF, would not conflict with the goals related to energy efficiency and conservation.
City of Los Angeles	Mobility 2035	Policy 2.3 Pedestrian Infrastructure: Recognize walking as a component of every trip, and ensure high-quality pedestrian access in all site planning and public right-of-way modifications to provide a safe and comfortable walking environment. Policy 2.5 Transit Network: Improve the performance and reliability of existing and future bus service. Policy 2.9 Multiple Networks: Consider the role of each enhanced network when designing a street that includes multiple modes. Policy 2.11 Transit Right-of-Way Design: Set high standards in designing public transit rights-of-way that consider user experience and support active transportation infrastructure. Policy 2.12 Walkway and Bikeway Accommodations: Design for pedestrian and bicycle travel when rehabilitating or installing a new bridge, tunnel, or exclusive transit right-of-way.	The KNE San Vicente–Fairfax, Fairfax, and La Brea Alignments, as well as the Hollywood Bowl Design Option and MSF, are consistent with Policy 2.3, Policy 2.5, Policy 2.9, Policy 2.11, and Policy 2.12. The alignments and design option do not conflict with the Los Angeles Mobility Element policies regarding infrastructure, specifically pedestrian infrastructure, transit networks, right-of-way designs, and walkability and bikeway accommodations. The MSF would support operations and maintenance of the alignments and design option. KNE would improve the transit network in Los Angeles and would give users more transit options. Furthermore, La Brea Avenue is identified as a "Comprehensive Transit Enhanced Street" and the KNE La Brea Alignment would further this objective.
City of West Hollywood	General Plan-Mobility Element	M- 5.2 Prioritize property access to promote transit, walking, and bicycling over auto access.	The KNE San Vicente–Fairfax, Fairfax, and La Brea Alignments are consistent with this policy as the alignments would contribute to the decrease of VMT and prioritize transit and active transportation. This policy would not apply to the Hollywood Bowl Design Option or MSF because neither project component would be located in the City of West Hollywood.
Metro	First/Last Mile Strategic Plan	The First/Last Mile Plan provides an adaptable vision for addressing first/last mile improvements in a systematic way and coordinating infrastructure investments in areas surrounding stations to extend the reach of transit with the goal of increasing ridership.	Metro would implement this policy for the KNE San Vicente–Fairfax, Fairfax, and La Brea Alignments, as well as the Hollywood Bowl Design Option and MSF, which would not conflict with the provisions set forth by this policy.

PLANNING AGENCY OR JURISDICTION	ADOPTED PLAN	DESCRIPTION OF PLAN	CONSISTENCY WITH PLANS AND POLICES
Metro	Green Construction Policy	Adopted to reduce emissions from construction equipment and includes a commitment by Metro that all on-road and off-road vehicles used in construction of a project will be greener and less polluting, and that best practices will be implemented to meet or exceed air quality emission standards. For example, from January 1, 2015, and onward, all off-road diesel-powered construction equipment greater than 50 horsepower shall meet the Tier 4 off-road emission standard at a minimum. Measures related to energy use include limiting idling, maintaining equipment to manufacturers' specifications, and using electric power in lieu of diesel power where available.	Metro would implement this policy for the KNE San Vicente–Fairfax, Fairfax, and La Brea Alignments, as well as the Hollywood Bowl Design Option and MSF, per project measure PM AQ-1. Therefore, KNE would not conflict with this policy.
Metro	Energy and Sustainability Policy	Established to aid Metro in controlling energy consumption and encouraging energy efficiency, conservation, and sustainability. Long-term objectives include: • Reducing the use of fossil fuels through the use of ambient and renewable energy sources. • Using fuels and electricity as efficiently as possible.	Metro would implement the Energy and Sustainability Policy for the construction and operational phases of the KNE San Vicente–Fairfax, Fairfax, and La Brea Alignments, as well as the Hollywood Bowl Design Option and MSF. KNE would implement: • Reducing the use of fossil fuels through the use of ambient and renewable energy sources. • Using fuels and electricity as efficiently as possible.
Metro	Environmental Policy	A comprehensive policy that provides guidance on such aspects as mitigating potential environmental impacts generated by development activities and reducing consumption of natural resources. Specific commitments related to energy include promoting renewable energy sources to address energy and environmental challenges.	Metro would implement the Environmental Policy for the KNE San Vicente–Fairfax, Fairfax, and La Brea Alignments, as well as the Hollywood Bowl Design Option and MSF; therefore, KNE would not conflict with this policy.
Metro	Renewable Energy Policy	Calls for renewable energy solutions while minimizing non-renewable energy use and also calls for a review of technical feasibility for renewable power projects on Metro property and infrastructure.	Metro would implement this policy for the KNE San Vicente–Fairfax, Fairfax, and La Brea Alignments, as well as the Hollywood Bowl Design Option and MSF; therefore, KNE would not conflict with this policy.
Metro	Energy Conservation and Management Plan	The Plan addresses existing and projected energy needs, identifies opportunities to reduce energy consumption and achieve cost savings, and sets forth implementation strategies, including for vehicle propulsion energy.	Metro would implement this plan for the KNE San Vicente–Fairfax, Fairfax, and La Brea Alignments, as well as the Hollywood Bowl Design Option and MSF; therefore, KNE would not conflict with this plan.

PLANNING AGENCY OR JURISDICTION	ADOPTED PLAN	DESCRIPTION OF PLAN	CONSISTENCY WITH PLANS AND POLICES
Metro	Sustainable Rail Plan	Examines strategies to reduce energy consumption from rail operations and analyzes their costs and potential energy savings. The study supports implementation of the Energy Conservation and Management Plan.	Metro would implement this plan for the KNE San Vicente–Fairfax, Fairfax, and La Brea Alignments, as well as the Hollywood Bowl Design Option and MSF; therefore, KNE would not conflict with this plan.
Metro	Climate Action and Adaptation Plan	Developed to provide a framework for improving energy efficiency and reducing GHG emissions and non-renewable energy consumption, including but not limited to, increased renewable energy procurement, increased photovoltaic installations, replacing lighting and appliances at Metro facilities with more energy-efficient controls and equipment, and an assessment of opportunities for Wayside Energy Storage Substation implementation to store energy from decelerating railcars.	Metro would implement this plan for the KNE San Vicente–Fairfax, Fairfax, and La Brea Alignments, as well as the Hollywood Bowl Design Option and MSF; therefore, KNE would not conflict with this plan.

Source: SCAG 2000; City of Los Angeles 2015; City of West Hollywood 2011; Metro 2007a, 2009, 2011a, 2011b, 2011c, 2012, 2013, 2014, 2019a
AB = Assembly Bill; EO = Executive Order; GHG = greenhouse gases; MSF = maintenance and storage facility; RTP/SCS = Regional Transportation Plan/Sustainable Communities Strategy; SB = Senate Bill; VMT = vehicle miles traveled

3.7.7.2.1.2 OPERATIONAL IMPACTS

No Impact. State and local energy conservation plans promote the use of renewable fuels and encourage a reduction in nonrenewable fuel usage and increased transit service to reduce passenger vehicles and the transportation-related fuel consumption on the roadway network. Table 3.7-16 provides a consistency check with the state and local energy plans and policies listed in Section 3.7.2. The KNE San Vicente–Fairfax Alignment would be consistent with all state and local energy plans and policies identified in the table.

The alignment would increase the availability of electric-powered transit, a form of transportation that is not dependent on traditional transportation fuels (i.e., diesel and gas), would result in a net reduction in VMT, and would promote alternative forms of transportation, including walking, bicycling, and transit use. Operation of the alignment would not conflict with or obstruct state or local plans for renewable energy or energy efficiency. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during operation.

3.7.7.2.2 KNE FAIRFAX ALIGNMENT

3.7.7.2.2.1 CONSTRUCTION IMPACTS

No Impact. As described under Impact ENG-1, the KNE Fairfax Alignment would increase energy consumption for the duration of construction. However, the alignment would comply with Metro's Green Construction Policy per project measure PM AQ-1, adhere to commitments established by the Moving Beyond Sustainability Strategic Plan 2020 per project measure PM AQ-3, and conform with Metro's Rail Design Criteria and Metro's Systemwide Station Design Standards Policy per project measure PM AQ-4. This would ensure consistency with the purpose and goals included in state and local energy plans and policies described in Table 3.7-16 and Section 3.7.2 to reduce energy consumption during construction activities.

By adhering to these plans and policies, construction of the alignment would not conflict with or obstruct state or local plans for renewable energy or energy efficiency. Therefore, the KNE Fairfax Alignment would have no impact during construction.

3.7.7.2.2.2 OPERATIONAL IMPACTS

No Impact. State and local energy conservation plans promote the use of renewable fuels and encourage a reduction in nonrenewable fuel usage and increased transit service to reduce passenger vehicles and the transportation-related fuel consumption on the roadway network. Table 3.7-16 provides a consistency check with the state and local energy plans and policies listed in Section 3.7.2. The KNE Fairfax Alignment would be consistent with all state and local energy plans and policies identified in the table.

The alignment would increase the availability of electric-powered transit, a form of transportation that is not dependent on traditional transportation fuels (i.e., diesel and gas), would result in a net reduction in VMT, and would promote alternative forms of transportation, including walking, bicycling, and transit use.

Operation of the alignment would not conflict with or obstruct state or local plans for renewable energy or energy efficiency. Therefore, the KNE Fairfax Alignment would have no impact during operation.

3.7.7.2.3 KNE LA BREA ALIGNMENT

3.7.7.2.3.1 CONSTRUCTION IMPACTS

No Impact. As described under Impact ENG-1, the KNE La Brea Alignment would increase energy consumption for the duration of construction. However, the alignment would comply with Metro's Green Construction Policy per project measure PM AQ-1, adhere to commitments established by the Moving Beyond Sustainability Strategic Plan 2020 per project measure PM AQ-3, and conform with Metro's Rail Design Criteria and Metro's Systemwide Station Design Standards Policy per project measure PM AQ-4. This would ensure consistency with the purpose and goals included in state and local energy plans and policies described in Table 3.7-16 and Section 3.7.2 to reduce energy consumption during construction activities.

By adhering to these plans and policies, construction of the alignment would not conflict with or obstruct state or local plans for renewable energy or energy efficiency. Therefore, the KNE La Brea Alignment would have no impact during construction.

3.7.7.2.3.2 OPERATIONAL IMPACTS

No Impact. State and local energy conservation plans promote the use of renewable fuels and encourage a reduction in nonrenewable fuel usage and increased transit service to reduce passenger vehicles and the transportation-related fuel consumption on the roadway network. Table 3.7-16 provides a consistency check with the state and local energy plans and policies listed in Section 3.7.2. The KNE La Brea Alignment would be consistent with all state and local energy plans and policies identified in the table.

The alignment would increase the availability of electric-powered transit, a form of transportation that is not dependent on traditional transportation fuels (i.e., diesel and gas), would result in a net reduction in VMT, and would promote alternative forms of transportation, including walking, bicycling, and transit use. Operation of the alignment would not conflict with or obstruct state or local plans for renewable energy or energy efficiency. Therefore, the KNE La Brea Alignment would have no impact during operation.

3.7.7.2.4 HOLLYWOOD BOWL DESIGN OPTION

3.7.7.2.4.1 CONSTRUCTION IMPACTS

No Impact. Similar to the alignments as described under Impact ENG-1, the Hollywood Bowl Design Option would increase energy consumption for the duration of construction. However, the design option would comply with Metro's Green Construction Policy per project measure PM AQ-1, adhere to commitments established by the Moving Beyond Sustainability Strategic Plan 2020 per project measure PM AQ-3, and conform with Metro's Rail Design Criteria and Metro's Systemwide Station Design Standards Policy per project measure PM AQ-4. This would ensure consistency with the purpose and goals included in state

and local energy plans and policies described in Table 3.7-16 and Section 3.7.2 to reduce energy consumption during construction activities.

By adhering to these plans and policies, construction of the design option would not conflict with or obstruct state or local plans for renewable energy or energy efficiency. Therefore, the Hollywood Bowl Design Option would have no impact during construction.

3.7.7.2.4.2 OPERATIONAL IMPACTS

No Impact. As described above for the alignments, the Hollywood Bowl Design Option would allow for an additional station at the Hollywood Bowl, which would primarily serve the Hollywood Bowl venue along with the residential land uses in the vicinity of the proposed station. Thus, the Hollywood Bowl Design Option would also facilitate electric-powered transit use in place of passenger vehicle use. State and local energy conservation plans promote the use of renewable fuels and encourage a reduction in nonrenewable fuel usage and increased transit service to reduce passenger vehicles and the transportation-related fuel consumption on the roadway network. Table 3.7-16 provides a consistency check with the state and local energy plans and policies listed in Section 3.7.2. The Hollywood Bowl Design Option would be consistent with all state and local energy plans and policies identified in the table.

The design option would increase the availability of electric-powered transit, a form of transportation that is not dependent on traditional transportation fuels (i.e., diesel and gas), would result in a net reduction in VMT, and would promote alternative forms of transportation, including walking, bicycling, and transit use. Operation of the alignment would not conflict with or obstruct state or local plans for renewable energy or energy efficiency. Therefore, the Hollywood Bowl Design Option would have no impact during operation.

3.7.7.2.5 MAINTENANCE AND STORAGE FACILITY

3.7.7.2.5.1 CONSTRUCTION IMPACTS

No Impact. The MSF would comply with applicable requirements of Metro's Green Construction Policy and Metro Rail Design Criteria per project measures PM AQ-1, PM AQ-3, and PM AQ-4, which would ensure consistency with the purpose and goals included in state and local energy plans and policies described in Table 3.7-16 and Section 3.7.2 to reduce energy consumption. By adhering to these plans and policies, construction of the MSF would not conflict with or obstruct state or local plans for renewable energy or energy efficiency. Therefore, the MSF would have no impact during construction.

3.7.7.2.5.2 OPERATIONAL IMPACTS

No Impact. The MSF would provide support necessary for operation of KNE and would therefore be consistent with the regional and local energy conservation plans detailed above for the alignments by contributing to implementation of KNE. Table 3.7-16 provides a consistency check with the state and local energy plans and policies described in Section 3.7.2. Since the MSF supports operation of the alignments and Hollywood Bowl Design Option, it would be consistent with all state and local energy plans and policies identified in the table. In addition, per project measure PM AQ-4, the MSF would be required to comply with energy-efficiency standards set forth by Title 24 of the California Administrative Code and the Appliance Efficiency Regulations. Title 24 requires that a project meet conservation standards, including installation of water-efficient fixtures and energy-efficient lighting. Title 24 also regulates energy consumption for the heating, cooling, ventilation, and lighting of nonresidential buildings. Since the MSF would allow for additional light rail operations under any of the alignments, it would provide regional VMT reductions and related transportation energy reduction benefits. Operation of the MSF would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, the MSF would have no impact during operation.

3.7.7.3 MITIGATION MEASURES

As the impact analysis above demonstrates, construction and operation of any of the KNE alignments and stations, the design option, and the MSF would result in no impact or a less than significant impact related to energy resources. Therefore, no mitigation is required under CEQA.

3.7.7.4 SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

Table 3.7-17 summarizes the energy impact significance conclusions and applicable mitigation measures. As indicated above, there are no significant energy impacts that would require mitigation.

TABLE 3.7-17. KNE SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

IMPACT		IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES				
		KNE SAN VICENTE–FAIRFAX ALIGNMENT	KNE FAIRFAX ALIGNMENT	KNE LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MAINTENANCE AND STORAGE FACILITY
Impact ENG-1: Energy Consumption	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
Impact ENG-2: Renewable Energy and Energy Efficiency	Impact Before Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact

Source: Connect Los Angeles Partners 2024
LTS = less than significant

3.8 GEOLOGY AND SOILS

3.8.1 INTRODUCTION

This discussion provides an evaluation of K Line Northern Extension (KNE) as it relates to geology, soils, seismicity, and mineral resources. It includes descriptions of the federal, state, and local regulatory setting, existing conditions, and the impacts from construction and operation of the proposed alignments and stations, the design option, and the maintenance and storage facility (MSF), as well as mitigation measures where applicable. For more detailed information, refer to the KNE Geology and Soils Technical Report (Appendix 3.8-A).

3.8.2 REGULATORY FRAMEWORK

3.8.2.1 FEDERAL

3.8.2.2 STATE

The following state laws and regulations are relevant to construction and operation of the project:

- Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code [PRC] 2621 et seq.)
- Seismic Hazards Mapping Act of 1990 (PRC Chapter 7.8, Section 2690-2699.6)
- California Building Code (California Code of Regulations [CCR] Title 24)
- National Pollutant Discharge Elimination System (NPDES)[1]
- Surface Mining and Reclamation Act of 1975 (PRC 2710 et seq.)[2]
- California Division of Occupational Safety and Health Administration (Cal/OSHA) Regulations (CCR, Title 8)

3.8.2.3 REGIONAL

No regional regulations are applicable to the project regarding geology, soils, seismicity, and mineral resources.

3.8.2.4 LOCAL

All Metro rail projects must be designed in accordance with the most recent Metro Rail Design Criteria (MRDC). MRDC Section 5 applies to geotechnical and seismic design (Metro 2017).

[1] Administered by the California State Water Resources Control Board

[2] The Surface Mining and Reclamation Act requires mineral deposits to be mapped and classified in Mineral Resource Zones (MRZ) as follows: (1) MRZ-1: areas where available data indicate that there is little or no likelihood for the presence of significant mineral deposits; (2) MRZ-2: areas where significant mineral deposits are present based on the available data or there is high likelihood that such mineral deposits are present; (3) MRZ-3: areas containing mineral deposits the significance of which cannot be determined from available data; and (4) MRZ-4: areas of no known mineral occurrences, where available data does not exclude the presence or absence of significant mineral resources.

The City of Los Angeles and City of West Hollywood have codes, ordinances, and general plans that regulate permitting, design, construction, and operational activities as they pertain to seismic and soil conditions, as well as drilling and other activities related to oil and gas wells. These policies generally pertain to public health and safety, the preservation of buildings and other structures, and to the protection of valuable resources.

3.8.3 METHODOLOGY

3.8.3.1 CEQA METHODOLOGY

The purpose of this analysis is to evaluate the project against California Environmental Quality Act (CEQA) thresholds of significance as the basis for determining the level of impacts related to geology, soils, seismicity, and mineral resources.

3.8.3.2 SIGNIFICANCE THRESHOLDS

In accordance with Appendix G of the 2022 CEQA Guidelines, the project would have a significant impact related to geology, soils, seismicity, and mineral resources if it would:[3]

- Impact GEO-1: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Division of Mines and Geology Special Publication 42)
  - Strong seismic ground shaking
  - Seismic-related ground failure, including liquefaction
  - Landslides
- Impact GEO-2: Result in substantial soil erosion or the loss of topsoil.
- Impact GEO-3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.[4]

[3] In addition to the geology and seismicity thresholds identified in this section of the Draft EIR, Appendix G of the State CEQA Guidelines includes a significance threshold for impacts relating to the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. However, this threshold is not applicable because the project is located in an urban environment with an existing sewer system with no existing septic tanks, and no septic tanks are proposed.

[4] *Lateral spreading* is a phenomenon were large blocks of intact soil move downslope in a rapid fluid-like movement as a result of liquefaction. *Land subsidence* is the progressive settling of the ground surface due to several sources, such as extraction of oil, groundwater, or gas. *Liquefaction* occurs when saturated, low relative density materials are transformed from a solid to a near-liquid state. *Collapse* is an abrupt depression of ground surface and can also be caused by extraction of subsurface fluids or mining.

- Impact GEO-4: Be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code (CBC), creating substantial direct or indirect risks to life or property.
- Impact GEO-5: Directly or indirectly destroy a unique geologic feature.
- Impact MR-1: Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state.
- Impact MR-2: Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

3.8.4 RESOURCE STUDY AREA

The resource study area (RSA) for the geology, soils, seismicity, and mineral resources analysis is delineated as a 300-foot radius around the alignments and stations, the design option, and the MSF.

3.8.5 EXISTING SETTING

This existing setting discussion summarizes current conditions related to geology, soils, seismicity, and mineral resources within and near the KNE RSA.

3.8.5.1 REGIONAL SETTING

3.8.5.1.1 REGIONAL GEOLOGIC SETTING

The project is located within a seismically active area of Southern California. Strong to moderate ground shaking is a common hazard for every project in the region. The project is primarily located within the Los Angeles Basin in the northern end of the Peninsular Ranges Geomorphic Province and near the southern boundary of the Transverse Ranges Geomorphic Province of California (Jennings 1938). The dominant structural features of the Transverse Ranges are characterized by east-west trending mountain ranges, such as the Santa Monica Mountains that were uplifted during the Miocene and early Pliocene times. The Peninsular Ranges are characterized by northwesterly trending mountain ranges and intervening valleys extending from the Los Angeles Basin to the southern tip of the Baja California Peninsula. At the northern boundary of the Los Angeles Basin, the Transverse and Peninsular Ranges are bordered along the Santa Monica and Hollywood Faults.

3.8.5.1.2 REGIONAL PHYSIOGRAPHY AND TOPOGRAPHY

The ground surface in the project vicinity is generally flat across the alignments, gently sloping to the south and west toward the coast. The design option extends into the foothills of the Santa Monica Mountains. Elevations in the RSA ranges from 100 feet at the MSF site, 110 feet at the southern end of the alignments near the Crenshaw/Adams Station, and 395 feet at the northern terminus of the alignments near the Hollywood/Highland Station. The design option reaches elevations up to 560 feet.

3.8.5.2 GEOLOGIC UNITS

This discussion identifies the main geologic units in the RSA. Relevant units for most of the alignments and stations and the MSF site include alluvium and sedimentary rock formations. Considering the depths, bedrock is not anticipated, except near the northern end of the RSA.

3.8.5.2.1 SURFICIAL DEPOSITS

As shown in Figure 3.8-1, the following surficial geologic units are present in the project vicinity:

- Young Alluvial Valley Deposits (Qya) underlie all three alignments
- Young Alluvial Fan Deposits (Qyf) underlie all three alignments
- Old Alluvial Valley Deposits (Qoa) underlie the MSF site
- Old Eolian and Dune Deposits (Qoe) underlie the MSF site
- Old Alluvial Fan Deposits (Qof) underlie all three alignments

3.8.5.2.2 FILL

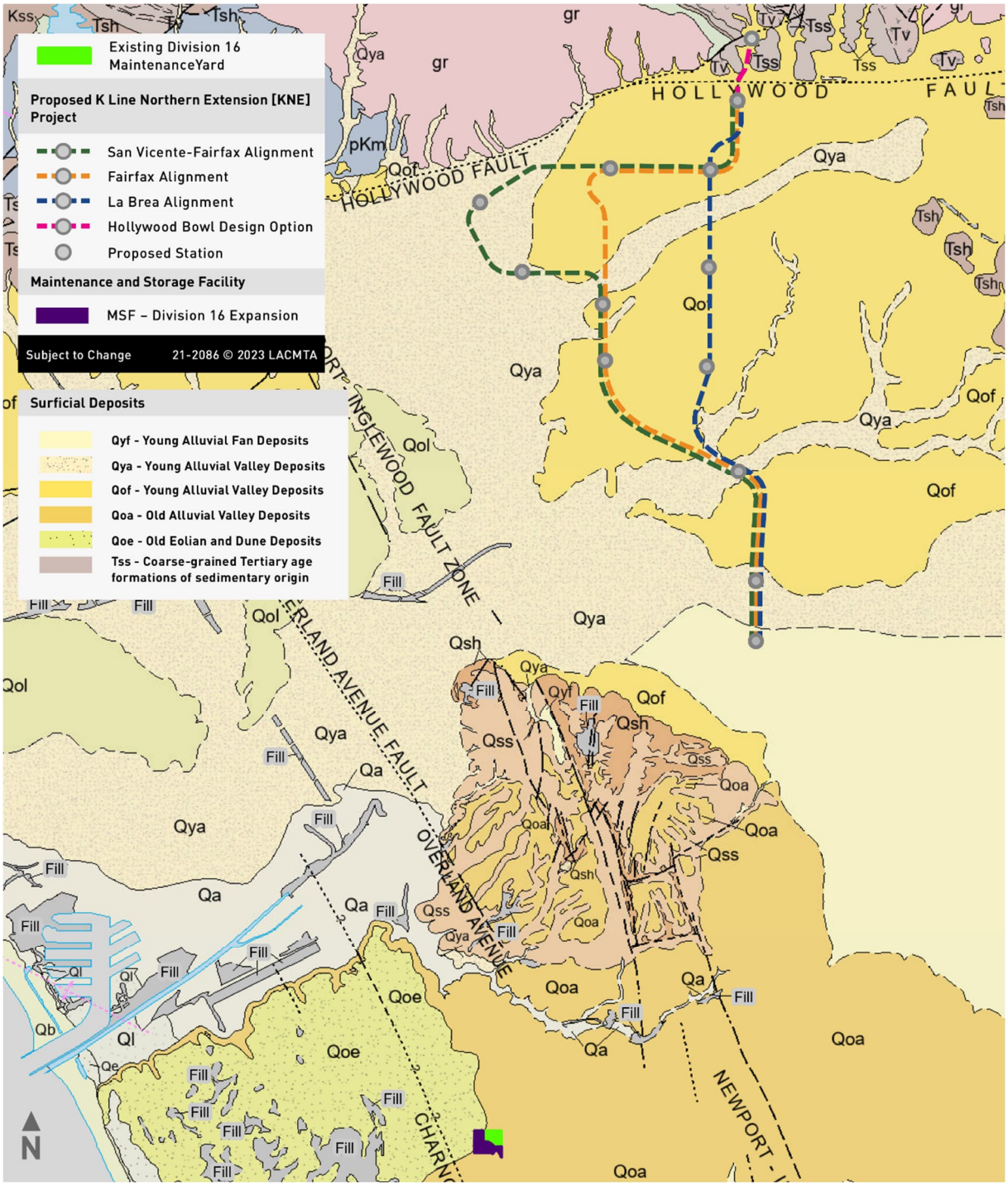
Fill is typically composed of deposits resulting from human construction, including engineered fill for buildings and roads. While not depicted on the geologic maps, fill is likely to underlie each alignment, the design option, and the MSF site.

3.8.5.2.3 FORMATIONS

Beneath the fill and alluvium, three subsurface geologic units are anticipated to cross the RSA:

- Lakewood Formation (Qlw)
- San Pedro Formation (Qsp)
- Fernando Formation (Tf)

FIGURE 3.8-1. SURFICIAL DEPOSITS IN PROJECT VICINITY



Source: Bedrossian et al. 2012; Connect Los Angeles Partners 2024

3.8.5.3 STRATIGRAPHY

In general, the sequence of the geologic units underlying the alignments and stations, from top to bottom, consists of fill, younger and older alluvium, and Qsp and Tf bedrock. Topanga Group bedrock units are present near the northern end of the alignments. The distribution of surficial geologic units is characterized by Quaternary alluvial sediments that were shed from the south flank of the Santa Monica Mountains and late tertiary sedimentary rock. The geologic unit underlying the MSF site consists of both Qoa and Qoe.

3.8.5.4 GROUNDWATER

For additional information related to groundwater quality, refer to Section 3.12, Hydrology and Water Quality.

3.8.5.4.1 ALIGNMENTS AND DESIGN OPTION

From the southern terminus of the alignments to Venice Boulevard, the depth to the highest groundwater level varies from 10 to 60 feet below ground surface (bgs). Between Venice Boulevard and 3rd Street, depth to groundwater is relatively flat and at about 10 to 20 feet bgs (California Geological Survey [CGS] 1998a, 1998b). Beyond this point to the northern end of the alignments, groundwater depth significantly varies between 10 to 100 feet bgs. This historical high groundwater map may differ from actual water tables measured at particular times. Groundwater levels at the site are subject to variations in groundwater basin management, seasonal variation, nearby construction, irrigation, and other artificial and natural influences.

3.8.5.4.2 MAINTENANCE AND STORAGE FACILITY

The highest historical groundwater level in the MSF RSA is approximately 50 feet bgs (CGS 1998c, 1998d). Inspection of groundwater records from historic soil borings and observation wells within 300 feet of the site shows that the depth to groundwater generally ranged from approximately 90 feet bgs near Arbor Vitae Street to approximately 115 feet bgs or more near Manchester Boulevard, except for a limited perched groundwater area that was observed south of Arbor Vitae Street to the east of the MSF. Localized perched water conditions, which are common in the alluvial deposits in the Los Angeles Basin, may be encountered at the site.

3.8.5.5 FAULTING AND SEISMICITY

3.8.5.5.1 ALIGNMENTS AND DESIGN OPTION

The active Hollywood Fault, identified as an Alquist-Priolo Earthquake Fault Zone (APEFZ), runs roughly east-west along the base of the Santa Monica Mountains from Sunset Boulevard and Doheny Drive in the west to Franklin Avenue and Vine Street in the east. Other active faults that are identified as APEFZs and located within five miles of the RSA include the Santa Monica and Newport-Inglewood Faults. The Santa Monica Fault extends westward from Beverly Hills across West Los Angeles and Santa Monica to Pacific Palisades. The Santa Monica Fault has been interpreted to extend eastward as the Hollywood Fault. The

Santa Monica and Hollywood Faults form the southern boundary of the Transverse Ranges that extends eastward for more than 150 miles through the northern part of the Los Angeles metropolitan region and to the west offshore and sit about 500 feet to one mile from the alignments.

The Newport-Inglewood Fault is located about 1.5 miles west of the southern end of the RSA. The Newport-Inglewood Fault Zone is composed of a series of discontinuous northwest-trending parallel to sub-parallel faults extending from Ballona Gap southwestward to the area offshore from Newport Beach. This fault separates the central and southwestern blocks of the Los Angeles Basin (Reichard et al. 2003).

Figure 3.8-2 shows seismic hazards in the vicinity of the alignments and stations and identifies APEFZs, liquefaction zones, and earthquake-induced landslide zones in the RSA. Figure 3.8-3 shows faults in the project vicinity, as well as the locations of past earthquakes.

3.8.5.5.2 MAINTENANCE AND STORAGE FACILITY

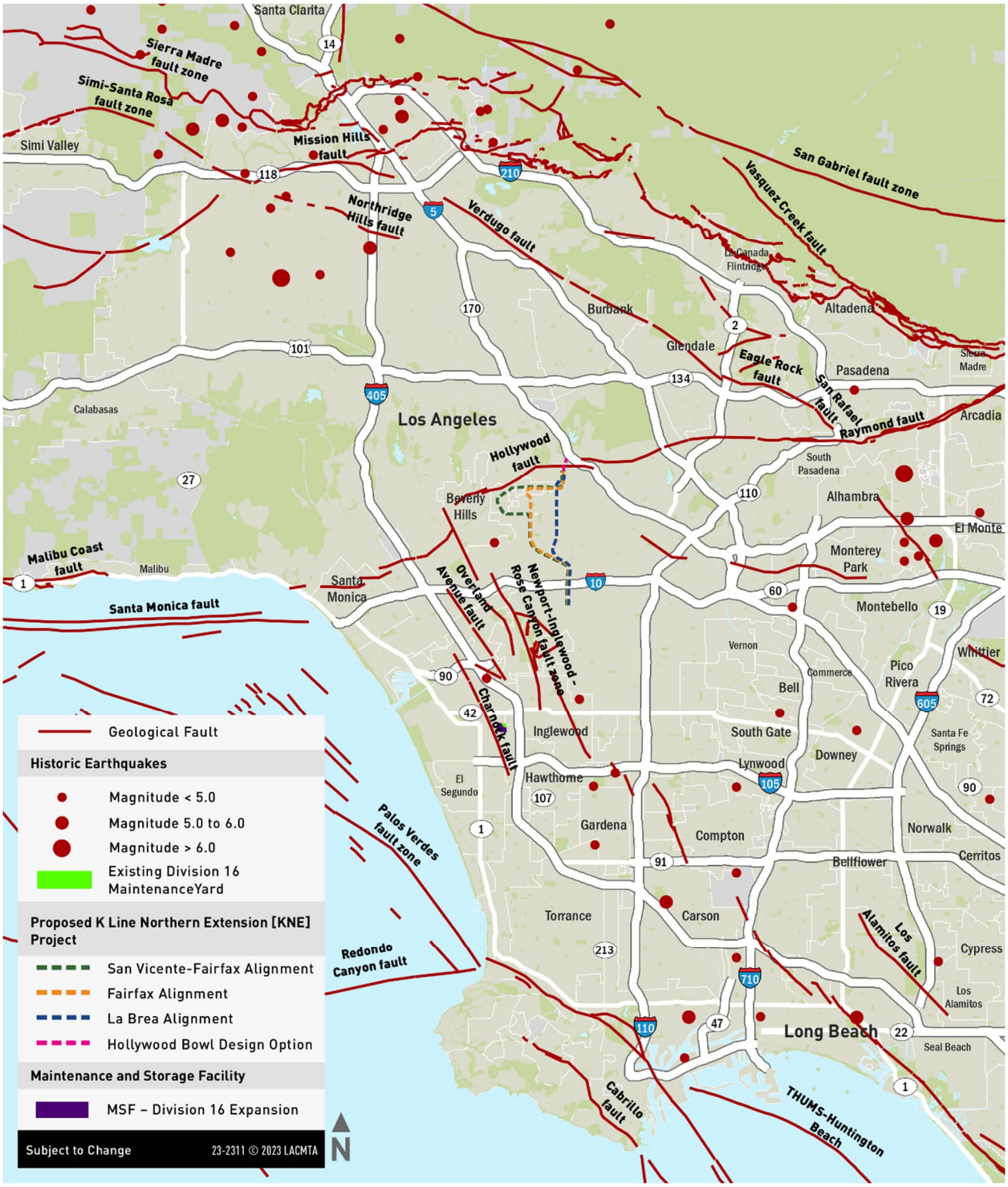
The closest potentially active fault to the MSF is the Charnock Fault, located roughly 0.5 mile west of the MSF site. The nature and existence of the Charnock Fault in the MSF vicinity is uncertain. The fault may extend toward and possibly beneath Los Angeles International Airport in the vicinity of the east end of Runways 25R and 25L (Camp, Dresser, & McKee 2001). The Charnock Fault is considered to have low potential for fault rupture.

In addition, the Overland Fault and the Newport-Inglewood-Rose Canyon Fault Zone are parallel to the Charnock Fault to the southwest. The Newport-Inglewood-Rose Canyon Fault Zone is located about 2.3 to 2.9 miles to the northeast of the MSF site, and the Overland Fault is 1.3 to 1.8 miles to the north of the MSF site. The Overland Fault is considered potentially active.

FIGURE 3.8-2. SEISMIC HAZARDS IN PROJECT VICINITY

Source: CGS 1998a, 1998b, 1998c, 1998d; Connect Los Angeles Partners 2024

FIGURE 3.8-3. HISTORIC SEISMICITY IN PROJECT VICINITY



Source: City of Los Angeles GeoHub (accessed 2023); Connect Los Angeles Partners 2024

3.8.5.6 SEISMIC HAZARDS

3.8.5.6.1 FAULT RUPTURE

California state law prohibits the construction of structures for human occupancy in an APEFZ unless the absence of Holocene faulting can be demonstrated by geologic studies. Based on the current project plans, the tail tracks of each alignment at the Hollywood/Highland Station are in a portion of the APEFZ associated with the Hollywood Fault. The design option would traverse the Hollywood Fault zone in the vicinity of Franklin Avenue, a designated APEFZ.

3.8.5.6.2 SEISMIC GROUND SHAKING

In accordance with MRDC Section 5 (Metro 2017), Metro rail structures need to be designed to sustain seismic effects based on the 2,500-year criteria. The probabilistic maximum design earthquake (MDE) response spectrum should be 4 percent probability of exceedance in 100 years. A repairable damage level should be considered for the MDE level in lieu of "significant damage" sometimes used for other projects. The probabilistic operating design earthquake (ODE) response spectrum should be 50 percent probability of exceedance in 100 years. Designing for the lower-level ground motions reduces the likelihood of future repair and maintenance costs by minimizing damage during more frequently occurring earthquakes. The ODE service level damage is considered to be none to minimal.

3.8.5.6.3 LIQUEFACTION

3.8.5.6.3.1 ALIGNMENTS AND STATIONS

As shown in Figure 3.8-2, portions of all alignments, including several stations, are located in a mapped liquefaction zone from Exposition Boulevard to Interstate (I-) 10. The KNE San Vicente–Fairfax Alignment is located in a mapped liquefaction zone between the intersection of Fairfax Avenue and 1st Street and Croft Avenue and Santa Monica Boulevard. The KNE Fairfax Alignment is located in a mapped liquefaction zone between 1st Avenue and Rosewood Avenue. The historic highest groundwater levels in the vicinity of the alignments range between 10 and 100 feet deep.

3.8.5.6.3.2 DESIGN OPTION

The design option is located in mapped liquefaction zones from Franklin Avenue to its alignment termini at the Hollywood Bowl, as shown in Figure 3.8-2. The historic highest groundwater levels in the vicinity of the design option range between 10 to 100 feet bgs.

3.8.5.6.3.3 MAINTENANCE AND STORAGE FACILITY

The MSF site is not located in the mapped liquefaction hazard areas. Based on the highest historical groundwater contour map (CGS 1998c, 1998d) and a review of existing borings performed in 2004 near the MSF site, groundwater is approximately 50 feet bgs or deeper.

3.8.5.6.4 SEISMICALLY INDUCED SETTLEMENT

Seismically induced settlement typically occurs in loose, unsaturated granular soils. Fill located above the groundwater table in the RSA could be considered loose and susceptible to seismic-induced settlement. Additionally, some alluvial soils in the RSA are anticipated to be loose to medium density and susceptible to seismically induced settlement.

Settlement can also occur post-liquefaction when the excess pore-water pressure induced by the seismic shaking dissipates and the soil readjusts in a new equilibrium condition. This typically occurs within a few seconds to minutes after the earthquake event. Post-liquefaction settlements can pose hazards to structures founded on shallow foundations.

3.8.5.6.5 SEISMICALLY INDUCED LANDSLIDES

As shown on Figure 3.8-2, the design option, north of the Hollywood/Highland Station, is in proximity to or within an identified landslide zone. Neither the alignments nor the MSF site is located within or in proximity to mapped seismically induced landslide potential zones.

3.8.5.7 NON-SEISMIC HAZARDS

3.8.5.7.1 SLOPE STABILITY

Some parts of the alignments and the design option may be in areas with high landslide susceptibility (Wills et al. 2011), as shown in Figure 3.8-4. In addition, weak, highly weathered rocks along steep slopes may be susceptible to landslides induced by extreme events such as heavy rainstorms or seismic shaking. The MSF site is not located in an area with potential landslide susceptibility.

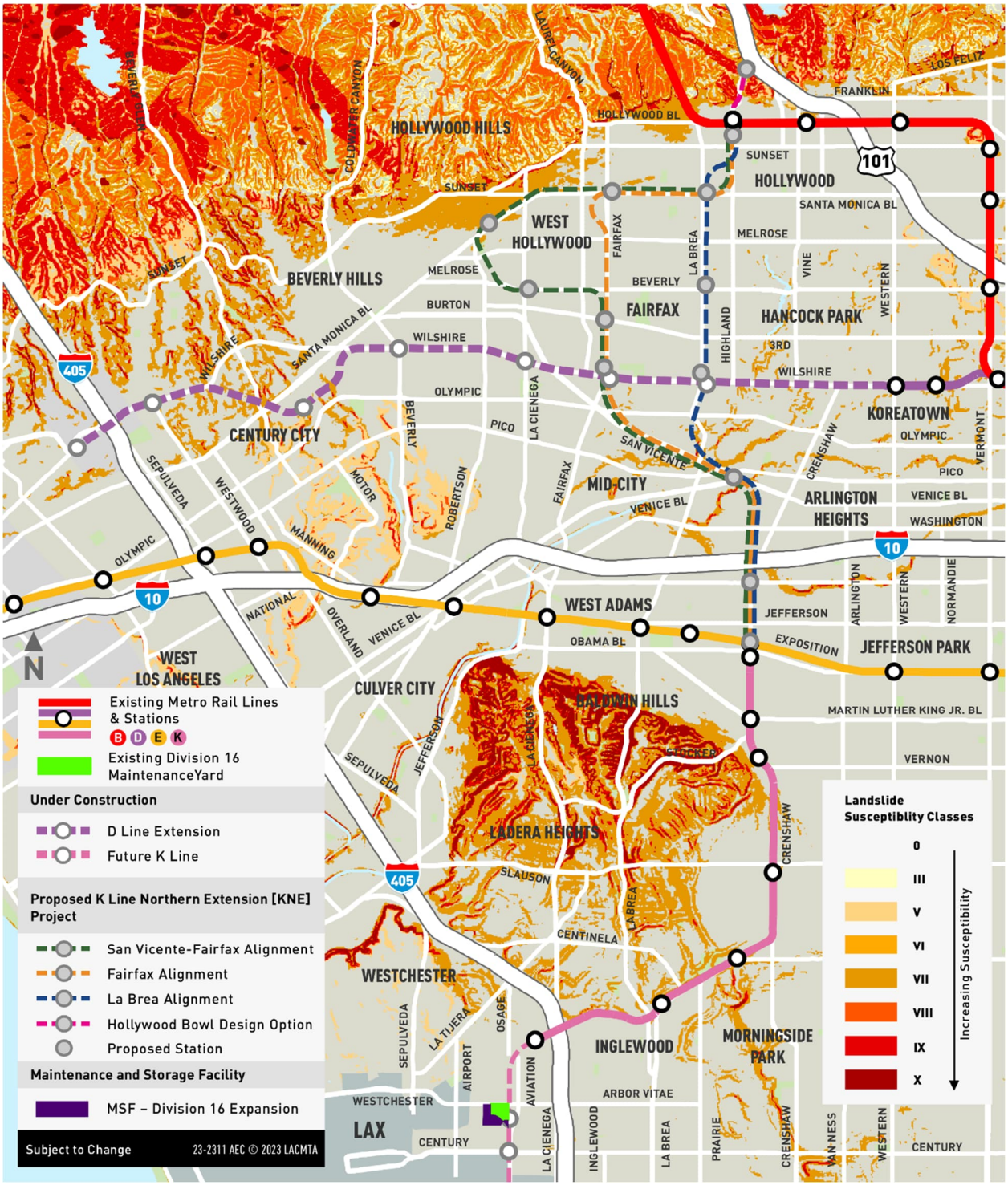
3.8.5.7.2 EXPANSIVE SOILS

Expansive soils are clay-rich soils that have the potential to shrink and swell when they dry out or become saturated. The shrink-swell capacity of expansive soils can result in differential movement below or adjacent to a structure. This differential movement can result in significant damage to pavements, as well as foundations and associated structures. Subsurface clay-rich soils may exist locally within alluvial soils present in the RSA.

3.8.5.7.2.1 ALIGNMENTS AND STATIONS

The alignments and stations would be constructed within areas of alluvial deposits. Clay-rich soils are most likely to be encountered within the portions of the alignments and some of the stations underlain by Qya deposits; clay-rich soils may exist locally within alluvial deposits present within the RSA (Bedrossian et al. 2012).

FIGURE 3.8-4. LANDSLIDE SUSCEPTIBILITY IN PROJECT VICINITY



Source: Wills et al. 2011; Connect Los Angeles Partners 2024

3.8.5.7.2.2 DESIGN OPTION

The design option is located in an area of Qof, as well as tertiary-age bedrock of the Topanga Group (Tt). The Tt may include sandstone, siltstone, shale, chert, basalt, conglomerate, and breccia (Campbell et al. 2014). Based on the soil matrix in these predominant alluvial units (Bedrossian et al. 2012), Qof are not expected to be clay-rich and therefore are not expected to have high expansion potential. However, clay-rich soils may exist locally within alluvial soils. In addition, some of the tertiary-age bedrock units, such as shale, typically contain clay minerals and might exhibit expansive behavior.

Available ratings for surficial soils in the area of the design option indicate low shrink-swell potential. These surficial soils are reported along the eastern portion of the design option along Highland Avenue and Cahuenga Boulevard and the northwestern portion along Cahuenga Boulevard. This finding should be verified and updated through site-specific exploration in the subsequent project design phases.

3.8.5.7.2.3 MAINTENANCE AND STORAGE FACILITY

The MSF site is underlain by Qoa and Qoe. Based on the soil matrix in this predominant geologic unit (Bedrossian et al. 2012), Qoa are likely to contain clayey soils, while Qoe are expected to contain primarily sands and, therefore, are not expected to exhibit expansive behavior. However, Qoa might contain clayey soils. The MSF site may be subject to expansive soil behavior effects. There is no available information in the United States Department of Agriculture (USDA) soil survey database on the shrink-swell potential of the surficial soils across the MSF site.

3.8.5.7.3 GROUND SETTLEMENT AND COLLAPSIBLE SOILS

Ground settlement occurs when new loading is applied to soil or soil support is removed. New loading can come in the form of structural loading or a reduction in the groundwater table elevation. In tunneling applications, ground settlement can occur from soil relaxation due to excavation of material at the tunnel face. Deep excavations can cause settlement of retained soil if excavation support is not rigid.

Collapsible soil is typically a loose, porous, dry natural soil deposit that undergoes a drastic rearrangement of particles upon wetting or loading that causes a significant decrease in volume. Based on review of the available data, no known collapsible soils are in the RSA. This finding should be verified through site-specific field investigation in the subsequent project design phases.

3.8.5.7.4 NON-FUEL RESOURCES

Mineral resources are commercially viable aggregate or mineral deposits, such as sand, gravel, and other construction aggregate (Los Angeles County 2022). California is a major consumer and producer of aggregates, with the Los Angeles metropolitan area consuming the largest quantities of construction aggregates in the country. The areas where geologic information indicates the presence of significant mineral resources are designated as MRZ-2. The RSA is not located within any of the major MRZ-2 areas identified within Los Angeles County. Los Angeles County regulations protect MRZ-2s and access to MRZ-2s from development and discourage incompatible land uses that could compromise accessibility for future extraction.

Parts of the project within the City of Los Angeles are within areas designated as MRZ-3 (i.e., areas containing known or inferred resources of undetermined mineral resource significance) (CGS 1994; 2010; 2021). The portion of the RSA within the City of West Hollywood is in an area designated as MRZ-1 (i.e., areas where available information indicates that little likelihood exists for the presence of significant mineral resources), with the exception of the westernmost curve of the KNE San Vicente–Fairfax Alignment, which lies or borders an MRZ-3 zone. The alignments and stations, the design option, and the MSF are within an urbanized area that has been previously disturbed by development; therefore, these areas are essentially unavailable for future mineral extraction.

3.8.5.7.5 OIL AND GAS

Extensive oil and gas exploration and petroleum extraction (pumping) from proven reserves have occurred within the RSA. Most wells within the RSA and vicinity are idle, abandoned, or dry. An idle well is a well that has not been in operation for two years or more and has not yet been properly plugged or abandoned. The approximate locations and operational status of known wells and oil/gas fields, include the following:

- The KNE San Vicente–Fairfax Alignment transverses the Las Cienegas, Salt Lake (South), Salt Lake, Beverly Hills, and Sherman (Abandoned) oil/gas fields. The KNE San Vicente–Fairfax Alignment is located along Beverly Boulevard, passing next to the Beverly Center, the site of active oil wells.
- The KNE Fairfax Alignment crosses the Las Cienegas, Salt Lake (South), Salt Lake, and Beverly Hills oil/gas fields. Based on available data, no active wells are in the vicinity of the KNE Fairfax Alignment.
- The KNE La Brea Alignment transverses the Las Cienegas and Salt Lake oil/gas fields and is not near any active wells.
- There are no known active wells or oil/gas fields near the design option.
- No known active wells or oil/gas fields are documented within the footprint of or within 0.5 mile of the MSF site.

The approximate locations of known wells and oil/gas fields, as well as status (active/idle/plugged) relative to the alignments and stations, the design option, and the MSF site, are shown on Figure 3.8-5 (City of Los Angeles 2020). For additional information related to oil and gas resources, refer to Section 3.11, Hazards and Hazardous Materials.

FIGURE 3.8-5. OIL AND GAS WELLS IN RESOURCE STUDY AREA

Sources: City of Los Angeles 2020; Connect Los Angeles Partners 2024

3.8.6 PROJECT MEASURES

Project measures are design features, best management practices (BMPs), or other commitments that Metro would implement as part of all proposed alignments, the design option, and the MSF to reduce or avoid environmental effects associated with project construction and operation. Project measures are not the same as mitigation measures, which are used to reduce an environmental impact's significance level. Where applicable, project measures are also discussed in Section 3.8.7 as part of the evaluation of environmental impacts.

3.8.6.1 PM GEO-1: DESIGN AND CONSTRUCT PROJECT PER THE METRO RAIL DESIGN CRITERIA (MOST RECENT VERSION)

The MRDC incorporates various design specifications from the Federal Highway Administration, California Department of Transportation (Caltrans), the State of California, Los Angeles County, and other sources by reference. Key compliance sections of the MRDC relative to geology and soils are Sections 5.3, 5.4, and 5.6, and the MRDC Section 5 Appendix, Metro Supplemental Seismic Design Criteria (Metro 2017). 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 CBC) have independent design criteria for building structures (Los Angeles County) that are required. In accordance with the MRDC, geotechnical report recommendations shall be incorporated into 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 alignments shall not be allowed to advance into the final design stage or into construction.

3.8.7 IMPACT EVALUATION AND MITIGATION MEASURES

This analysis presents the construction and operational impacts for geology, soils, seismicity, and mineral resources, as well as any applicable mitigation measures associated with KNE. A summary of the impact conclusions and applicable mitigation measures is found in Table 3.8-1 in Section 3.8.7.9.

3.8.7.1 IMPACT GEO-1: EXPOSURE TO SEISMIC HAZARDS

Impact GEO-1: Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

- Rupture of a known earthquake fault, as delineated on the most recent APEFZ Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Division of Mines and Geology Special Publication 42)?
- Strong seismic ground shaking?
- Seismic-related ground failure, including liquefaction?
- Landslides?

3.8.7.1.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.8.7.1.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The KNE San Vicente–Fairfax Alignment would be located within a seismically active area of Southern California. Strong to moderate ground shaking is a common hazard for every project in the area; therefore, the alignment would be subject to the impacts of seismic shaking. Potential impacts include, but are not limited to, human loss or injury, as well as structural damage.

The only known active fault with surface rupture potential in the RSA is the Hollywood Fault, located north of the Hollywood/Highland Station. The portion of the alignment along Highland Avenue, between Yucca Street and Franklin Avenue, lies within an established APEFZ associated with the Hollywood Fault. Therefore, the alignment would be subject to the impacts of a potential ground rupture. While it is possible that an unmapped fault also crosses the alignment, based on the available data, the probability of a surface fault rupture along the remaining portion of the alignment is low.

Seismic-related ground failures include liquefaction, post-liquefaction settlements, and landslides. Portions of the alignment lie within a mapped CGS liquefaction zone. More specifically, the areas within the liquefaction potential zones include an area between the southern terminus of the alignment (the connection with the existing Metro K Line at the Expo/Crenshaw Station at Exposition Boulevard) and I-10, and an area between the intersection of Fairfax Avenue and 1st Street and Croft Avenue and Santa Monica Boulevard. The former area is primarily underlain by Qyf and Qya deposits, and the historical high groundwater in this area is relatively shallow (10 to 20 feet bgs) (CGS 1998b). The area between the intersections of Fairfax Avenue and 1st Street and Croft Avenue and Santa Monica Boulevard is also underlain by Qya deposits, as well as Qof deposits along Beverly Boulevard, with a shallow historical high groundwater table reported at about 10 feet bgs (CGS 1998b). The KNE San Vicente–Fairfax Alignment would likely be subject to adverse effects of liquefaction and liquefaction-induced settlements in these areas. Additionally, it could be subject to post-seismic settlement due to densification of loose, unsaturated alluvial soils, if present.

The KNE San Vicente–Fairfax Alignment is not located within a mapped earthquake-induced landslide zone; therefore, it would not be subject to impacts related to earthquake-induced landslides.

The impacts of ground rupture, seismic ground shaking, and earthquake-induced ground instabilities for construction of the alignment would be addressed with implementation of project measure PM GEO-1 and conformance with the applicable regulatory framework (see Section 3.8.2). The regulatory framework includes MRDC, the most recent version of the CBC, Metro's standard specifications, and Cal/OSHA and industry standards. All underground design and construction would be reviewed by the Metro Tunnel Advisory Panel and the Metro Fire Life Safety Committee. When necessary, traffic and pedestrian control during construction activities shall comply with the local jurisdiction guidelines and the Manual of Uniform Traffic Control Devices standards. Strict compliance with health and safety regulations would lower the risks to construction personnel. In addition, as part of final design, geotechnical construction recommendations and instrumentation and monitoring plans would be developed by a qualified engineer. These recommendations would be documented in the geotechnical design reports and incorporated in structural design and construction drawings, as required by the MRDC. Adherence

and implementation of the recommendations that typically address temporary conditions during construction would reduce the impacts of seismic hazards to humans and structures.

As described above, construction of the alignment would not directly or indirectly cause potential substantial adverse effects related to rupture of a known earthquake fault, strong seismic ground shaking, seismic ground failure, including liquefaction, or landslides. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.8.7.1.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. The KNE San Vicente–Fairfax Alignment would be located within a seismically active area of Southern California. Strong to moderate ground shaking is a common hazard for every project in the area; therefore, the alignment would be subject to the impacts of seismic shaking. Potential impacts include, but are not limited to, human loss or injury, as well as structural damage.

The only known active fault with surface rupture potential in the RSA is the Hollywood Fault, located north of the Hollywood/Highland Station. The portion of the alignment along Highland Avenue, between Yucca Street and Franklin Avenue, lies within an established APEFZ associated with the Hollywood Fault. Therefore, the alignment would be subject to the impacts of a potential ground rupture. While it is possible that an unmapped fault also crosses the alignment, based on the available data, the probability of a surface fault rupture along the remaining portion of the alignment is low.

Seismic-related ground failures include liquefaction, post-liquefaction settlements, and landslides. Portions of the alignment lie within a mapped CGS liquefaction zone. More specifically, the areas within the liquefaction potential zones include an area between the southern terminus of the alignment (the connection with the existing Metro K Line at the Expo/Crenshaw Station at Exposition Boulevard) and I-10, and an area between the intersection of Fairfax Avenue and 1st Street and Croft Avenue and Santa Monica Boulevard. The former area is primarily underlain by Qyf and Qya deposits, and the historical high groundwater in this area is relatively shallow (10 to 20 feet bgs) (CGS 1998b). The area between the intersections of Fairfax Avenue and 1st Street and Croft Avenue and Santa Monica Boulevard is also underlain by Qya deposits, as well as Qof deposits along Beverly Boulevard, with a shallow historical high groundwater table reported at about 10 feet bgs (CGS 1998b). The KNE San Vicente–Fairfax Alignment would likely be subject to adverse effects of liquefaction and liquefaction-induced settlements in these areas. Additionally, it could be subject to post-seismic settlement due to densification of loose, unsaturated alluvial soils, if present.

The KNE San Vicente–Fairfax Alignment is not located within a mapped earthquake-induced landslide zone; therefore, it would not be subject to impacts related to earthquake-induced landslides.

Project measure PM GEO-1 would address the operational impacts of ground rupture on the alignment. The MRDC states that a detailed fault study should be performed to determine the location and extents of the fault zones, fault activity, and fault rupture characteristics (e.g., amount of displacement, distribution of slip across the zone, vertical and horizontal displacement components), in accordance with the requirements set by CGS Special Publication 42 (CGS 2018) for structures lying within an established APEFZ. The primary purpose of the CGS Special Publication is to detect potentially active faults in the vicinity of the mapped faults and to assess

the recency of their activity. The evaluation of the surface rupture hazard may include available data collection, surficial field investigations (e.g., remote sensing, Lidar-imagery, field-based observations), subsurface site-specific investigations (e.g., trenching, boring, and sampling; cone penetration tests; geophysical techniques), and age-dating methods. The portions of the KNE San Vicente–Fairfax Alignment in the vicinity of the Hollywood Fault would be designed and constructed in compliance with the MRDC (including performance-based standards in MRDC Section 5 Appendix – Metro Supplemental Seismic Design Criteria, Rev. 12 [Metro 2017]), which states that Metro rail structures need to be designed to sustain seismic effects based on the MDE with a return period of 2,500 years, and all additional regulatory requirements. The required site-specific investigations would assist in the determination of the level of ground rupture hazard, including the extents of the fault zone and magnitude of anticipated fault displacement to be accommodated by the components of the alignment.

Although it is generally safer to be in a tunnel, in the event of an earthquake during operation, as stated above, there is risk for human loss or injury of commuters and damage to structures due to potential ground rupture, ground shaking, or seismically induced ground instability, with major disruptions in operation while damage is repaired. In addition, project components might experience permanent deformation after a significant seismic event. In order to address the operational impact from seismic ground motion, the alignment would be designed and constructed in conformance with MRDC and CBC requirements, which are incorporated into project measure PM GEO-1.

Structures would be designed per MRDC and to account for earthquake-induced ground instability, liquefaction potential, and anticipated total and differential deformations. The implementation of a comprehensive geotechnical exploration program, as required by the MRDC, would provide information about the subsurface conditions, including groundwater level and the depths and extents of the soils susceptible to liquefaction, and would assist in the determination of the liquefaction and lateral spreading potential, as well as estimates of the seismically induced settlements. If the estimated seismically induced settlements cannot be accommodated by the structures, ground improvement may be implemented to mitigate the impacts of the liquefaction-induced settlements on project structures. Ground improvement methods may include, but are not limited to, compaction grouting, compensation grouting, jet grouting, dynamic compaction, and stone columns. The selection of the appropriate method would be made based on subsurface conditions, site accessibility and space limitations, performance requirements, and cost effectiveness.

As described above, conformance with design requirements would reduce the risk of human loss or injury, as well as reduce the potential for structural damage to project structures and for interruptions in the normal operating conditions in the event of ground rupture or an earthquake event. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.8.7.1.2 KNE FAIRFAX ALIGNMENT

3.8.7.1.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The KNE Fairfax Alignment would be located within a seismically active area of Southern California. Strong to moderate ground shaking is a common hazard for every project in the area; therefore, the alignment would be subject to the impacts of seismic shaking. Potential impacts include, but are not limited to, human loss or injury, as well as structural damage.

The only known active fault with surface rupture potential in the RSA is the Hollywood Fault, located north of the Hollywood/Highland Station. The portion of the alignment along Highland Avenue, between Yucca Street and Franklin Avenue, lies within an established APEFZ associated with the Hollywood Fault. Therefore, the alignment would be subject to the impacts of a potential ground rupture. While it is possible that an unmapped fault also crosses the alignment, based on the available data, the probability of a surface fault rupture along the remaining portion of the alignment is low.

Seismic-related ground failures include liquefaction, post-liquefaction settlements, and landslides. Portions of the alignment lie within a mapped CGS liquefaction zone. More specifically, the areas within the liquefaction potential zones include an area between the southern terminus of the alignment (the connection with the existing Metro K Line at the Expo/Crenshaw Station at Exposition Boulevard) and I-10, and an area along Fairfax Avenue between 1st Street and Rosewood Avenue. The former area is primarily underlain by Qyf and Qya deposits, and the historical high groundwater in this area is relatively shallow (10 to 20 feet bgs) (CGS 1998b). The area between 1st Street and Rosewood Avenue is underlain by Qya deposits, as well as Qof deposits, with a shallow historical high groundwater table reported between 10 and 30 feet bgs (CGS 1998b). The KNE Fairfax Alignment would likely be subject to adverse effects of liquefaction and liquefaction-induced settlements in these areas. Additionally, it could be subject to post-seismic settlement due to densification of loose, unsaturated alluvial soils, if present.

The KNE Fairfax Alignment is not located within a mapped earthquake-induced landslide zone; therefore, it would not be subject to impacts related to earthquake-induced landslides.

The impacts of ground rupture, seismic ground shaking, and earthquake-induced ground instabilities for construction of the alignment would be addressed with implementation of project measure PM GEO-1 and conformance with the applicable regulatory framework (see Section 3.8.2). The regulatory framework includes MRDC, the most recent version of the CBC, Metro's standard specifications, and Cal/OSHA and industry standards. All underground design and construction would be reviewed by the Metro Tunnel Advisory Panel and the Metro Fire Life Safety Committee. When necessary, traffic and pedestrian control during construction activities shall comply with the local jurisdiction guidelines and the Manual of Uniform Traffic Control Devices standards. Strict compliance with health and safety regulations would lower the risks to construction personnel. In addition, as part of final design, geotechnical construction recommendations and instrumentation and monitoring plans would be developed by a qualified engineer. These recommendations would be documented in the geotechnical design reports and incorporated in structural design and construction drawings, as required by the MRDC. Adherence and implementation of the recommendations that typically address temporary conditions during construction would reduce the impacts of seismic hazards to humans and structures.

As described above, construction of the alignment would not directly or indirectly cause potential substantial adverse effects related to rupture of a known earthquake fault, strong seismic ground shaking, seismic ground failure, including liquefaction, or landslides. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.8.7.1.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. The KNE Fairfax Alignment would be located within a seismically active area of Southern California. Strong to moderate ground shaking is a common hazard for every project in the area; therefore, the alignment would be subject to the impacts of seismic shaking. Potential impacts include, but are not limited to, human loss or injury, as well as structural damage.

The only known active fault with surface rupture potential in the RSA is the Hollywood Fault, located north of the Hollywood/Highland Station. The portion of the alignment along Highland Avenue, between Yucca Street and Franklin Avenue, lies within an established APEFZ associated with the Hollywood Fault. Therefore, the alignment would be subject to the impacts of a potential ground rupture. While it is possible that an unmapped fault also crosses the alignment, based on the available data, the probability of a surface fault rupture along the remaining portion of the alignment is low.

Seismic-related ground failures include liquefaction, post-liquefaction settlements, and landslides. Portions of the alignment lie within a mapped CGS liquefaction zone. More specifically, the areas within the liquefaction potential zones include an area between the southern terminus of the alignment (the connection with the existing Metro K Line at the Expo/Crenshaw Station at Exposition Boulevard) and I-10, and an area along Fairfax Avenue between 1st Street and Rosewood Avenue. The former area is primarily underlain by Qyf and Qya deposits, and the historical high groundwater in this area is relatively shallow (10 to 20 feet bgs) (CGS 1998b). The area between 1st Street and Rosewood Avenue is underlain by Qya deposits, as well as Qof deposits, with a shallow historical high groundwater table reported between 10 and 30 feet bgs (CGS 1998b). The KNE Fairfax Alignment would likely be subject to adverse effects of liquefaction and liquefaction-induced settlements in these areas. Additionally, it could be subject to post-seismic settlement due to densification of loose, unsaturated alluvial soils, if present.

The KNE Fairfax Alignment is not located within a mapped earthquake-induced landslide zone; therefore, it would not be subject to impacts related to earthquake-induced landslides.

Project measure PM GEO-1 would address the operational impacts of ground rupture on the alignment. The MRDC states that a detailed fault study should be performed to determine the location and extents of the fault zones, fault activity, and fault rupture characteristics (e.g., amount of displacement, distribution of slip across the zone, vertical and horizontal displacement components), in accordance with the requirements set by CGS Special Publication 42 (CGS 2018) for structures lying within an established APEFZ. The primary purpose of the CGS Special Publication is to detect potentially active faults in the vicinity of the mapped faults and to assess the recency of their activity. The evaluation of the surface rupture hazard may include available data collection, surficial field investigations (e.g., remote sensing, Lidar-imagery, field-based observations), subsurface site-specific investigations (e.g., trenching, boring, and sampling; cone penetration tests; geophysical techniques), and age-dating methods. The portions of the KNE Fairfax Alignment in the vicinity of the Hollywood Fault would be designed and constructed in compliance with the MRDC (including

performance-based standards in MRDC Section 5 Appendix – Metro Supplemental Seismic Design Criteria, Rev. 12 [Metro 2017]), which states that Metro rail structures need to be designed to sustain seismic effects based on the MDE with a return period of 2,500 years, and all additional regulatory requirements. The required site-specific investigations would assist in the determination of the level of ground rupture hazard, including the extents of the fault zone and magnitude of anticipated fault displacement to be accommodated by the components of the alignment.

Although it is generally safer to be in a tunnel, in the event of an earthquake during operation, as stated above, there is risk for human loss or injury of commuters and damage to structures due to potential ground rupture, ground shaking, or seismically induced ground instability, with major disruptions in operation while damage is repaired. In addition, project components might experience permanent deformation after a significant seismic event. In order to address the operational impact from seismic ground motion, the alignment would be designed and constructed in conformance with MRDC and CBC requirements, which are incorporated into project measure PM GEO-1.

Structures would be designed per MRDC and to account for earthquake-induced ground instability, liquefaction potential, and anticipated total and differential deformations. The implementation of a comprehensive geotechnical exploration program, as required by the MRDC, would provide information about the subsurface conditions, including groundwater level and the depths and extents of the soils susceptible to liquefaction, and would assist in the determination of the liquefaction and lateral spreading potential, as well as estimates of the seismically induced settlements. If the estimated seismically induced settlements cannot be accommodated by the structures, ground improvement may be implemented to mitigate the impacts of the liquefaction-induced settlements on project structures. Ground improvement methods may include, but are not limited to, compaction grouting, compensation grouting, jet grouting, dynamic compaction, and stone columns. The selection of the appropriate method would be made based on subsurface conditions, site accessibility and space limitations, performance requirements, and cost effectiveness.

As described above, conformance with design requirements would reduce the risk of human loss or injury, as well as reduce the potential for structural damage to project structures and for interruptions in the normal operating conditions in the event of ground rupture or an earthquake event. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.8.7.1.3 KNE LA BREA ALIGNMENT

3.8.7.1.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The KNE La Brea Alignment would be located within a seismically active area of Southern California. Strong to moderate ground shaking is a common hazard for every project in the area; therefore, the alignment would be subject to the impacts of seismic shaking. Potential impacts include, but are not limited to, human loss or injury of workers, as well as structural damage.

The only known active fault with surface rupture potential in the RSA is the Hollywood Fault, located north of the Hollywood/Highland Station. The portion of the alignment along Highland Avenue, between Yucca Street and Franklin Avenue, lies within an established APEFZ associated with the Hollywood Fault. Therefore, the alignment would be subject to the impacts of a potential ground rupture. While it is

possible that an unmapped fault also crosses the alignment, based on the available data, the probability of a surface fault rupture along the remaining portion of the alignment is low.

Seismic-related ground failures include liquefaction, post-liquefaction settlements, and landslides. Portions of the alignment lie within a mapped CGS liquefaction zone. More specifically, the areas within the liquefaction potential zones include an area between the southern terminus of the alignment (the connection with the existing Metro K Line at the Expo/Crenshaw Station at Exposition Boulevard) and I-10. This area is underlain by Qyf and Qya deposits, and the historically high groundwater in this area is relatively shallow (between 10 and 20 feet bgs) along most of its length (CGS 1998b). The KNE La Brea Alignment would likely be subject to adverse effects of liquefaction and liquefaction-induced settlements in this area. Additionally, it could be subject to post-seismic settlement due to densification of loose, unsaturated alluvial soils, if present.

The KNE La Brea Alignment is not located within a mapped earthquake-induced landslide zone; therefore, it would not be subject to impacts related to earthquake-induced landslides.

The impacts of ground rupture, seismic ground shaking, and earthquake-induced ground instabilities for construction of the alignment would be addressed with implementation of project measure PM GEO-1 and conformance with the applicable regulatory framework (see Section 3.8.2). The regulatory framework includes MRDC, the most recent version of the CBC, Metro's standard specifications, and Cal/OSHA and industry standards. All underground design and construction would be reviewed by the Metro Tunnel Advisory Panel and the Metro Fire Life Safety Committee. When necessary, traffic and pedestrian control during construction activities shall comply with the local jurisdiction guidelines and the Manual of Uniform Traffic Control Devices standards. Strict compliance with health and safety regulations would lower the risks to construction personnel. In addition, as part of final design, geotechnical construction recommendations and instrumentation and monitoring plans would be developed by a qualified engineer. These recommendations would be documented in the geotechnical design reports and incorporated in structural design and construction drawings, as required by the MRDC. Adherence and implementation of the recommendations that typically address temporary conditions during construction would reduce the impacts of seismic hazards to humans and structures.

As described above, construction of the alignment would not directly or indirectly cause potential substantial adverse effects related to rupture of a known earthquake fault, strong seismic ground shaking, seismic ground failure, including liquefaction, or landslides. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.8.7.1.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. The KNE La Brea Alignment would be located within a seismically active area of Southern California. Strong to moderate ground shaking is a common hazard for every project in the area; therefore, the alignment would be subject to the impacts of seismic shaking. Potential impacts include, but are not limited to, human loss or injury, as well as structural damage.

The only known active fault with surface rupture potential in the RSA is the Hollywood Fault, located north of the Hollywood/Highland Station. The portion of the alignment along Highland Avenue, between

Yucca Street and Franklin Avenue, lies within an established APEFZ associated with the Hollywood Fault. Therefore, the alignment would be subject to the impacts of a potential ground rupture. While it is possible that an unmapped fault also crosses the alignment, based on the available data, the probability of a surface fault rupture along the remaining portion of the alignment is low.

Seismic-related ground failures include liquefaction, post-liquefaction settlements, and landslides. Portions of the alignment lie within a mapped CGS liquefaction zone. More specifically, the areas within the liquefaction potential zones include an area between the southern terminus of the alignment (the connection with the existing Metro K Line at the Expo/Crenshaw Station at Exposition Boulevard) and I-10. This area is underlain by Qyf and Qya deposits, and the historically high groundwater in this area is relatively shallow (between 10 and 20 feet bgs) along most of its length (CGS 1998b). The KNE La Brea Alignment would likely be subject to adverse effects of liquefaction and liquefaction-induced settlements in this area. Additionally, it could be subject to post-seismic settlement due to densification of loose, unsaturated alluvial soils, if present.

The KNE La Brea Alignment is not located within a mapped earthquake-induced landslide zone; therefore, it would not be subject to impacts related to earthquake-induced landslides.

Project measure PM GEO-1 would address the operational impacts of ground rupture on the alignment. The MRDC states that a detailed fault study should be performed to determine the location and extents of the fault zones, fault activity, and fault rupture characteristics (e.g., amount of displacement, distribution of slip across the zone, vertical and horizontal displacement components), in accordance with the requirements set by CGS Special Publication 42 (CGS 2018) for structures lying within an established APEFZ. The primary purpose of the CGS Special Publication is to detect potentially active faults in the vicinity of the mapped faults and to assess the recency of their activity. The evaluation of the surface rupture hazard may include available data collection, surficial field investigations (e.g., remote sensing, Lidar-imagery, field-based observations), subsurface site-specific investigations (e.g., trenching, boring, and sampling; cone penetration tests; geophysical techniques), and age-dating methods. The portions of the KNE La Brea Alignment in the vicinity of the Hollywood Fault would be designed and constructed in compliance with the MRDC (including performance-based standards in MRDC Section 5 Appendix – Metro Supplemental Seismic Design Criteria, Rev. 12 [Metro 2017]), which states that Metro rail structures need to be designed to sustain seismic effects based on the MDE with a return period of 2,500 years, and all additional regulatory requirements. The required site-specific investigations would assist in the determination of the level of ground rupture hazard, including the extents of the fault zone and magnitude of anticipated fault displacement to be accommodated by the components of the alignment.

Although it is generally safer to be in a tunnel, in the event of an earthquake during operation, as stated above, there is risk for human loss or injury of commuters and damage to structures due to potential ground rupture, ground shaking, or seismically induced ground instability, with major disruptions in operation while damage is repaired. In addition, project components might experience permanent deformation after a significant seismic event. In order to address the operational impact from seismic ground motion, the alignment would be designed and constructed in conformance with MRDC and CBC requirements, which are incorporated into project measure PM GEO-1.

Structures would be designed per MRDC and to account for earthquake-induced ground instability, liquefaction potential, and anticipated total and differential deformations. The implementation of a comprehensive geotechnical exploration program, as required by the MRDC, would provide information about the subsurface conditions, including groundwater level and the depths and extents of the soils susceptible to liquefaction, and would assist in the determination of the liquefaction and lateral spreading potential, as well as estimates of the seismically induced settlements. If the estimated seismically induced settlements cannot be accommodated by the structures, ground improvement may be implemented to mitigate the impacts of the liquefaction-induced settlements on project structures. Ground improvement methods may include, but are not limited to, compaction grouting, compensation grouting, jet grouting, dynamic compaction, and stone columns. The selection of the appropriate method would be made based on subsurface conditions, site accessibility and space limitations, performance requirements, and cost effectiveness.

As described above, conformance with design requirements would reduce the risk of human loss or injury, as well as reduce the potential for structural damage to project structures and for interruptions in the normal operating conditions in the event of ground rupture or an earthquake event. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.8.7.1.4 HOLLYWOOD BOWL DESIGN OPTION

3.8.7.1.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The known Hollywood Fault trace of the Latest Quaternary era crosses the Hollywood Bowl Design Option near Franklin Avenue. The portion of the design option between Yucca Street and north of the western projection of Bonair Place is within the established APEFZ associated with the Hollywood Fault. The Hollywood Bowl Design Option would be subject to the impacts of a potential ground rupture at this location. While it is possible that an unmapped fault also crosses the design option, based on the available data, the probability of a surface fault rupture along the remaining portion of the design option is low.

Regarding seismic-related ground failures, including liquefaction, post-liquefaction settlements, and landslides, the design option is expected to encounter primarily Qof and tertiary-age Tt. Historical groundwater data in this area indicate that south of Franklin Avenue the highest groundwater level ranges between 80 and 100 feet bgs (CGS 1998b); the availability of groundwater data is limited for the highest groundwater level north of this area. Preliminarily, it can be concluded that the design option would be subject to the adverse effects of liquefaction and liquefaction-induced settlements, pending results of site-specific investigations. The design option is not expected to be subject to post-seismic settlement due to densification of loose, unsaturated alluvial soils because it is underlain primarily by older alluvial soils. In addition, the design option north of the Hollywood/Highland Station would be close to or within a mapped earthquake-induced landslide zone and would be subject to effects related to earthquake-induced landslides.

Construction activities required for the Hollywood Bowl Design Option may be subject to seismic hazards during an earthquake event that could result in potential human loss or injury for workers, as well as damage to structures. The impacts of ground rupture, seismic ground shaking, and earthquake-induced ground

instabilities on construction of the design option would be addressed with implementation of project measure PM GEO-1 and conformance with the applicable regulatory framework.

The Hollywood Bowl Design Option would not directly or indirectly cause potential substantial adverse effects related to rupture of a known earthquake fault, strong seismic ground shaking, seismic ground failure, including liquefaction, or landslides. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.8.7.1.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. The Hollywood Bowl Design Option would be located within a seismically active area of Southern California. Strong to moderate ground shaking is a common hazard for every project in the area; therefore, the design option would be subject to the impacts of seismic shaking. Potential impacts include, but are not limited to, human loss or injury, as well as structural damage.

As stated above, the Hollywood Fault crosses the design option. Therefore, the design option would be subject to the impacts of a potential ground rupture. While it is possible that an unmapped fault also crosses the design option, based on the available data, the probability of a surface fault rupture along the remaining portion of the design option is low.

Project measure PM GEO-1 and conformance with the applicable regulatory framework would address impacts of ground rupture on the design option. The required site-specific investigations would assist in the determination of the level of ground rupture hazard, including the extents of the fault zone and magnitude of anticipated fault displacement to be accommodated by the components of the design option. Where the design option tunnel would cross the Hollywood Fault, additional design features would likely be required. The MRDC recognizes that at fault crossings, should the maximum design earthquake-induced displacement occur, the tunnel should still be of "sufficient diameter to fulfill its function after repairs."

Although it is generally safer to be in a tunnel, in the event of an earthquake during operation of the Hollywood Bowl Design Option, there is risk for human loss or injury of commuters, as well as damage to structures due to potential ground rupture, ground shaking, or seismically induced ground instability, and including subsequent disruptions in the regular operating schedules while damage is repaired. In addition, project components might experience permanent deformation after a significant seismic event.

A widely accepted approach is "overboring" the tunnel through the fault zone with transition zones narrowing to the regular tunnel diameter and backfilling with easily re-minable and crushable material (such as "cellular" concrete). This approach was used in the Metro B Line Segment 3 Hollywood Fault crossing. Use of ductile lining is another approach that allows for the accommodation of the fault ruptured-induced deformations.

The MRDC provides guidance for the determination of the displacement demand and analytical procedures for the evaluation of fault displacement impacts to Metro structures. Structures would be designed per MRDC and to account for earthquake-induced ground instability, liquefaction potential, and anticipated total and differential deformations. The implementation of a comprehensive geotechnical exploration program, as required by the MRDC, would provide information about the subsurface conditions,

including groundwater level and the depths and extents of the soils susceptible to liquefaction, and would assist in the determination of the liquefaction and lateral spreading potential, as well as estimates of the seismically induced settlements. If the estimated seismically induced settlements cannot be accommodated by the structures, ground improvement may be implemented to mitigate the impacts of the liquefaction-induced settlements on project structures. Ground improvement methods may include, but are not limited to, compaction grouting, compensation grouting, jet grouting, dynamic compaction, and stone columns. The selection of the appropriate method would be made based on subsurface conditions, site accessibility and space limitations, performance requirements, and cost effectiveness.

As described above, conformance with design requirements would reduce the risk of human loss or injury, as well as reduce the potential for structural damage to project structures and for interruptions in the normal operating conditions in the event of ground rupture or an earthquake event. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.8.7.1.5 MAINTENANCE AND STORAGE FACILITY

3.8.7.1.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. No known active faults cross the MSF site. The nearest mapped fault is the Charnock Fault, which is of Late Quaternary age and is located a minimum of approximately 0.5 mile west of the MSF RSA. In addition, according to the mapped APEFZ, the Overland Fault is approximately 1.3 miles north of the MSF site and the Newport-Inglewood-Rose Canyon Fault Zone is approximately 1.8 miles northeast of the site; both have surface rupture potential. While it is possible that an unmapped fault crosses the MSF site, based on the available data, the probability of surface fault rupture within the MSF site is low. Therefore, the MSF is not expected to be subject to ground rupture impacts.

Regarding seismic-related ground failures, including liquefaction, post-liquefaction settlements, and landslides, the MSF RSA is within the mapped CGS liquefaction zone. The historic highest groundwater level in the vicinity ranges from 40 to 50 feet bgs (CGS 1998c; 1998d), and the MSF would likely not be subject to the adverse effects of liquefaction and liquefaction-induced settlements, pending results of a site-specific investigation. The MSF is not expected to be subject to post-seismic settlements due to densification of loose, unsaturated alluvial soils because the site is underlain by older alluvial deposits.

The MSF site is not within a mapped earthquake-induced landslide zone. Therefore, it would not be subject to impacts related to earthquake-induced landslides.

The MSF would use conventional methods for construction of trackwork and buildings for maintenance and storage of light rail vehicles. Construction activities may also include, but are not limited to, demolition of existing facilities, site preparation, grading, utility installation, fencing installation, paving, and landscaping. These construction activities might be subject to seismic hazards during an earthquake event that could result in potential human loss or injury for workers, as well as damage to structures.

The impacts of seismic ground shaking on construction of the MSF would be addressed with the implementation of project measure PM GEO-1 and conformance with the applicable regulatory framework. Therefore, the MSF would have a less than significant impact during construction.

3.8.7.1.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. As described for construction impacts above, no known active faults with surface rupture potential cross the MSF site. In addition, the site is not located within a liquefaction or landslide zone. Therefore, the MSF would not be subject to the adverse effects of seismically induced ground instability or surface rupture during operation.

The MSF components and workers would be subject to ground shaking that could lead to human loss or injury, damage to structures, and major disruptions in operation. Implementation of project measure PM GEO-1 would address the impacts of ground shaking on the MSF. Design of MSF surface structures would comply with MRDC Section 5.5 and with the Metro Supplemental Seismic Design Criteria and the applicable sections of the CBC. The MRDC Section 5 Appendix – Metro Supplemental Seismic Design Criteria, Rev. 12 (Metro 2017) adopts a two-level performance-based seismic design associated with the MDE (4 percent probability of exceedance in 100 years) and ODE (50 percent probability of exceedance in 100 years). Metro structures, including buildings, are required to be designed to sustain repairable damage for the MDE. For the ODE, Metro structures must sustain no structure damage to minimal structural damage and need to remain in service for general use immediately after a post-earthquake inspection, including all systems (mechanical, electrical, plumbing, and fire life safety). MRDC Section 5.5.3 requires site-specific recommendations for the seismic design parameters needed per the CBC to be included in the geotechnical design reports.

Conformance with design requirements would lower the risk of human loss or injury and reduce the potential of damage to MSF structures and for interruptions in normal operating conditions in the event of ground rupture or an earthquake event. Therefore, the MSF would have a less than significant impact during operation.

3.8.7.2 IMPACT GEO-2: SOIL EROSION

Impact GEO-2: Would the project result in substantial soil erosion or the loss of topsoil?

3.8.7.2.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.8.7.2.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The KNE San Vicente–Fairfax Alignment is contained within an urban setting and the topsoil in the RSA has been previously disturbed or concealed by human activities. The only exposed topsoil is typically in landscaped medians, planters, setbacks, athletic fields, or residential yards. Construction activities would temporarily expose surficial soils to erosion by wind and hydraulic forces, increasing the potential for erosion and topsoil loss when compared to existing conditions. Additionally, a rainstorm event concurrent with construction activities could accelerate the rate of erosion and topsoil loss. The increase in erosion potential for the alignment would primarily be limited to the construction of shafts, stations, and cut-and-cover excavations. Underground construction activities related to tunnel excavation and construction would not affect erosion potential or topsoil loss.

Existing regulatory requirements limit erosion and topsoil loss during construction activities. These requirements include implementation of BMPs, stormwater pollution prevention plans, and erosion and sedimentation control measures that would ensure excavation, grading, and other earth-moving activities would not have a significant impact. Erosion control BMPs might include the implementation and use of detention ponds or infiltration pits to collect and reduce erosion, using barriers to slow the rate of runoff, or controlling the use of water irrigation. BMPs are discussed in Section 3.12, Hydrology and Water Quality. An erosion and sedimentation control plan would be prepared by the contractor in compliance with applicable NPDES permits.

All earthwork and grading activities require grading permits from the Los Angeles Department of Buildings and Safety that include requirements and standards designed to limit impacts to acceptable levels. All on-site grading and site preparation must comply with applicable provisions of Chapter IX, Division 70 of the Los Angeles Municipal Code (LAMC), which addresses grading, excavations, and fill placement. It also requires the preparation of a site-specific geotechnical report to evaluate soils issues. The City of West Hollywood also requires a grading permit and plan check prior to commencement of grading activities. All grading and excavation shall be performed in accordance with the CBC Section 1804 as adopted and amended by the City of West Hollywood.

Upon completion of construction activities, it is anticipated that surficial soil previously concealed by pavements and structures would be restored to an impervious condition. The potential for erosion and topsoil loss would be temporary, and while the potential would increase during construction, compliance with regulatory requirements would keep that potential to a minimum.

As described above, the impact of construction on soil erosion and topsoil loss would be minimal. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.8.7.2.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. As described for construction impacts above, the KNE San Vicente–Fairfax Alignment is contained within an urban setting and the topsoil in the RSA has been previously disturbed or concealed by human activities. The only exposed topsoil is typically in landscaped medians, planters, setbacks, athletic fields, or residential yards. Operation of the alignment would not result in ground disturbance or an increase of the exposed area of soils when compared to existing conditions. The alignment would comply with applicable post-construction NPDES permits[5] and any permit requirements of the Cities of Los Angeles and West Hollywood, which minimize erosion impacts from development projects. As described above, the impact of operation on soil erosion and topsoil loss would be minimal. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

[5] NPDES permits are discussed in more detail in Section 3.12, Hydrology and Water Quality.

3.8.7.2.2 KNE FAIRFAX ALIGNMENT

3.8.7.2.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The KNE Fairfax Alignment is contained within an urban setting and the topsoil in the RSA has been previously disturbed or concealed by human activities. The only exposed topsoil is typically in landscaped medians, planters, setbacks, athletic fields, or residential yards. Construction activities would temporarily expose surficial soils to erosion by wind and hydraulic forces, increasing the potential for erosion and topsoil loss when compared to existing conditions. Additionally, a rainstorm event concurrent with construction activities could accelerate the rate of erosion and topsoil loss. The increase in erosion potential for the alignment would primarily be limited to the construction of shafts, stations, and cut-and-cover excavations. Underground construction activities related to tunnel excavation and construction would not affect erosion potential or topsoil loss.

Existing regulatory requirements limit erosion and topsoil loss during construction activities. These requirements include implementation of BMPs, stormwater pollution prevention plans, and erosion and sedimentation control measures that would ensure excavation, grading, and other earth-moving activities would not have a significant impact. Erosion control BMPs might include the implementation and use of detention ponds or infiltration pits to collect and reduce erosion, using barriers to slow the rate of runoff, or controlling the use of water irrigation. BMPs are discussed in Section 3.12, Hydrology and Water Quality. An erosion and sedimentation control plan would be prepared by the contractor in compliance with applicable NPDES permits.

All earthwork and grading activities require grading permits from the Los Angeles Department of Buildings and Safety that include requirements and standards designed to limit impacts to acceptable levels. All on-site grading and site preparation must comply with applicable provisions of Chapter IX, Division 70 of the LAMC, which addresses grading, excavations, and fill placement. It also requires the preparation of a site-specific geotechnical report to evaluate soils issues. The City of West Hollywood also requires a grading permit and plan check prior to commencement of grading activities. All grading and excavation shall be performed in accordance with the CBC Section 1804 as adopted and amended by the City of West Hollywood.

Upon completion of construction activities, it is anticipated that surficial soil previously concealed by pavements and structures would be restored to an impervious condition. The potential for erosion and topsoil loss would be temporary, and while the potential would increase during construction, compliance with regulatory requirements would keep that potential to a minimum.

As described above, the impact of construction on soil erosion and topsoil loss would be minimal. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.8.7.2.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. As described for construction impacts above, the KNE Fairfax Alignment is contained within an urban setting and the topsoil in the RSA has been previously disturbed or concealed by human activities. The only exposed topsoil is typically in landscaped medians, planters, setbacks, athletic fields, or residential yards. Operation of the alignment would not result in ground disturbance or an increase of the exposed area of soils when compared to existing conditions. The alignment would comply with applicable post-construction NPDES permits[6] and any permit requirements of the Cities of Los Angeles and West Hollywood, which minimize erosion impacts from development projects. As described above, the impact of operation on soil erosion and topsoil loss would be minimal. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.8.7.2.3 KNE LA BREA ALIGNMENT

3.8.7.2.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The KNE La Brea Alignment is contained within an urban setting and the topsoil in the RSA has been previously disturbed or concealed by human activities. The only exposed topsoil is typically in landscaped medians, planters, setbacks, athletic fields, or residential yards. Construction activities would temporarily expose surficial soils to erosion by wind and hydraulic forces, increasing the potential for erosion and topsoil loss when compared to existing conditions. Additionally, a rainstorm event concurrent with construction activities could accelerate the rate of erosion and topsoil loss. The increase in erosion potential for the alignment would primarily be limited to the construction of shafts, stations, and cut-and-cover excavations. Underground construction activities related to tunnel excavation and construction would not affect erosion potential or topsoil loss.

Existing regulatory requirements limit erosion and topsoil loss during construction activities. These requirements include implementation of BMPs, stormwater pollution prevention plans, and erosion and sedimentation control measures that would ensure excavation, grading, and other earth-moving activities would not have a significant impact. Erosion control BMPs might include the implementation and use of detention ponds or infiltration pits to collect and reduce erosion, using barriers to slow the rate of runoff, or controlling the use of water irrigation. BMPs are discussed in Section 3.12, Hydrology and Water Quality. An erosion and sedimentation control plan would be prepared by the contractor in compliance with applicable NPDES permits.

All earthwork and grading activities require grading permits from the Los Angeles Department of Buildings and Safety that include requirements and standards designed to limit impacts to acceptable levels. All on-site grading and site preparation must comply with applicable provisions of Chapter IX, Division 70 of the LAMC, which addresses grading, excavations, and fill placement. It also requires the preparation of a site-specific geotechnical report to evaluate soils issues. The City of West Hollywood also requires a grading permit and plan check prior to commencement of grading activities. All grading and excavation shall be performed in accordance with the CBC Section 1804 as adopted and amended by the City of West Hollywood.

[6] NPDES permits are discussed in more detail in Section 3.12, Hydrology and Water Quality.

Upon completion of construction activities, it is anticipated that surficial soil previously concealed by pavements and structures would be restored to an impervious condition. The potential for erosion and topsoil loss would be temporary, and while the potential would increase during construction, compliance with regulatory requirements would keep that potential to a minimum.

As described above, the impact of construction on soil erosion and topsoil loss would be minimal. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.8.7.2.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. As described for construction impacts above, the KNE La Brea Alignment is contained within an urban setting and the topsoil in the RSA has been previously disturbed or concealed by human activities. The only exposed topsoil is typically in landscaped medians, planters, setbacks, athletic fields, or residential yards. Operation of the alignment would not result in ground disturbance or an increase of the exposed area of soils when compared to existing conditions. The alignment would comply with applicable post-construction NPDES permits[7] and any permit requirements of the Cities of Los Angeles and West Hollywood, which minimize erosion impacts from development projects. As described above, the impact of operation on soil erosion and topsoil loss would be minimal. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.8.7.2.4 HOLLYWOOD BOWL DESIGN OPTION

3.8.7.2.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The Hollywood Bowl Design Option is contained within an urban setting and the topsoil in the RSA has been previously disturbed or concealed by human activities. The only exposed topsoil is typically in landscaped medians, planters, setbacks, or residential yards. Construction activities would temporarily expose surficial soils to erosion by wind and hydraulic forces, increasing the potential for erosion and topsoil loss when compared to existing conditions. Additionally, a rainstorm event concurrent with construction activities could accelerate the rate of erosion and topsoil loss. In addition, the tail tracks at the terminus of the design option north of Pilgrimage Bridge would require grading of the hillside west of Cahuenga Boulevard. The topsoil of the hillside is largely undisturbed by human activity. Underground construction activities related to tunnel excavation and construction would not affect erosion potential or topsoil loss.

Existing regulatory requirements limit erosion and topsoil loss during construction activities. These requirements include implementation of BMPs, stormwater pollution prevention plans, and erosion and sedimentation control measures that would ensure excavation, grading, and other earth-moving activities would not have a significant impact. Erosion control BMPs might include the implementation and use of detention ponds or infiltration pits to collect and reduce erosion, using barriers to slow the rate of runoff, or controlling the use of water irrigation. BMPs are discussed in Section 3.12, Hydrology and Water

[7] NPDES permits are discussed in more detail in Section 3.12, Hydrology and Water Quality.

Quality. An erosion and sedimentation control plan would be prepared by the contractor in compliance with applicable NPDES permits.

Earthwork and grading activities require grading permits from the Los Angeles Department of Buildings and Safety that include requirements and standards designed to limit impacts to acceptable levels. All on-site grading and site preparation must comply with applicable provisions of Chapter IX, Division 70 of the LAMC, which addresses grading, excavations, and fill placement. It also requires the preparation of a site-specific geotechnical report to evaluate soils issues. In addition, the grading required for the design option would occur in a designated hillside area. Therefore, the design option grading would be considered engineered grading per LAMC Section 91.7004 and would require a grading permit and grading design to be performed by a licensed civil engineer. The designated hillside areas generally contribute to greater erosion and require additional sedimentation controls. Metro and the contractor would comply with the relevant codes and permits.

Upon completion of construction activities, it is anticipated that surficial soil previously concealed by pavements and structures would be restored to an impervious condition. The potential for erosion and topsoil loss would be temporary, and while the potential would increase during construction, compliance with regulatory requirements would minimize that potential.

As described above, the impact of construction on soil erosion and topsoil loss would be minimal. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.8.7.2.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the Hollywood Bowl Design Option would not result in ground disturbance or an increase of the exposed area of soils when compared to existing conditions. The design option would comply with applicable post-construction NPDES permits[8] and any standards required by the City of Los Angeles, which minimize erosion impacts from development projects, and the impact of construction on soil erosion and topsoil loss would be minimal. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.8.7.2.5 MAINTENANCE AND STORAGE FACILITY

3.8.7.2.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The MSF site is within an urban setting and the topsoil in the RSA has been previously disturbed or concealed by human activities. The only exposed topsoil is typically in landscaped medians, planters, setbacks, athletic fields, or residential yards. Construction activities would temporarily expose surficial soils to erosion by wind and hydraulic forces, increasing the potential for erosion and topsoil loss when compared to existing conditions. Additionally, a rainstorm event concurrent with construction activities could accelerate the rate of erosion and topsoil loss.

[8] NPDES permits are discussed in more detail in Section 3.12, Hydrology and Water Quality.

Existing regulatory requirements limit erosion and topsoil loss during construction activities. These requirements include implementation of BMPs, stormwater pollution prevention plans, and erosion and sedimentation control measures that would ensure excavation, grading, and other earth-moving activities would not have a significant impact. Erosion control BMPs might include the implementation and use of detention ponds or infiltration pits to collect and reduce erosion, using barriers to slow the rate of runoff, or controlling the use of water irrigation. BMPs are discussed in Section 3.12, Hydrology and Water Quality. An erosion and sedimentation control plan would be prepared by the contractor in compliance with applicable NPDES permits.

All earthwork and grading activities require grading permits from the Los Angeles Department of Buildings and Safety that include requirements and standards designed to limit impacts to acceptable levels. All on-site grading and site preparation must comply with applicable provisions of Chapter IX, Division 70 of the LAMC, which addresses grading, excavations, and fill placement. It also requires the preparation of a site-specific geotechnical report to evaluate soils issues.

Upon completion of construction activities, it is anticipated that surficial soil previously concealed by pavements and structures would be restored to an impervious condition. The potential for erosion and topsoil loss would be temporary, and while the potential would increase during construction, compliance with regulatory requirements would keep that potential to a minimum.

As described above, the impact of construction on soil erosion and topsoil loss would be minimal. Therefore, the MSF would have a less than significant impact during construction.

3.8.7.2.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the MSF would not result in ground disturbance or an increase of the exposed area of soils when compared to existing conditions. The MSF would comply with applicable post-construction NPDES permits[9] and any standards required by the City of Los Angeles, which minimize erosion impacts from development projects, and the impact of construction on soil erosion and topsoil loss would be minimal. Therefore, the MSF would have a less than significant impact during operation.

3.8.7.3 IMPACT GEO-3: SOIL STABILITY

Impact GEO-3: Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

[9] NPDES permits are discussed in more detail in Section 3.12, Hydrology and Water Quality.

3.8.7.3.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.8.7.3.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE San Vicente–Fairfax Alignment would involve excavation for shafts and stations, temporary excavation support, tunneling, and dewatering that could affect soil stability and lead to ground movements (lateral or vertical) and subsidence. Dewatering to provide dry working conditions could affect soil stability by changing the in-situ soil stresses that can propagate to the surface and could manifest as surface settlement. Excavation for shafts and stations could negatively impact soil stability by reducing the self-support capacity of the retained soil and subsequently increase the loading demands on the temporary shoring. Furthermore, movement of temporary shoring could result in surface settlement and soil collapse. Tunneling with a tunnel boring machine (TBM) could cause volume loss through over-excavation and lead to settlement or sinkholes at the surface.

The KNE San Vicente–Fairfax Alignment would comply with regulatory and design requirements, as well as with project measure PM GEO-1, and construction of the alignment would not result in loss of soil stability. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.8.7.3.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. The KNE San Vicente–Fairfax Alignment RSA is located on relatively level or gently sloping ground. There are no mapped landslide-susceptible areas in the RSA.

As shown in Figure 3.8-2, part of the alignment is in a mapped liquefaction zone. Areas of historically high, shallow groundwater and loose, coarse-grained alluvial soils could cause seismic-induced liquefaction and settlement, including lateral spreading. Lateral spreading is a phenomenon where large blocks of intact soil move downslope in a rapid fluid-like movement as a result of liquefaction. The mass moves toward an unconfined area or free-face, such as a descending slope or stream-cut bluff, and can move on slope gradients as gentle as one degree. While the conditions for liquefaction potential are present in the RSA, the free-face condition required for inducement of lateral spreading is not present.

Subsidence or settlement could be caused by ongoing oil and gas extraction near the alignment. Within the RSA, there are active oil wells at the Beverly Center at the corner of San Vicente Boulevard and Beverly Boulevard, which are estimated to be approximately 300 feet from the alignment. While subsidence in the vicinity of the wells due to hydrocarbon extraction is a possibility, LAMC Section 13.01 contains provisions for subsidence monitoring and mitigation of permitted hydrocarbon extraction, and it is assumed that any active well would comply with these regulations. Furthermore, the alignment is not in an area of known land subsidence mapped by the United States Geological Survey (USGS) Areas of Land Subsidence in California (USGS n.d.).

Operation of the alignment would not exacerbate or cause conditions leading to landslides, liquefaction, lateral spreading, subsidence, or collapse. Implementation of project measure PM GEO-1 during design and construction would include design measures to stabilize soils, such as compaction grouting, compensation grouting, jet grouting, dynamic compaction, and stone columns, and operation of the

alignment would not result in loss of soil stability. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.8.7.3.2 KNE FAIRFAX ALIGNMENT

3.8.7.3.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE Fairfax Alignment would involve excavation for shafts and stations, temporary excavation support, tunneling, and dewatering that could affect soil stability and lead to ground movements (lateral or vertical) and subsidence. Dewatering to provide dry working conditions could affect soil stability by changing the in-situ soil stresses that can propagate to the surface and could manifest as surface settlement. Excavation for shafts and stations could negatively impact soil stability by reducing the self-support capacity of the retained soil and subsequently increase the loading demands on the temporary shoring. Furthermore, movement of temporary shoring could result in surface settlement and soil collapse. Tunneling with a TBM could cause volume loss through over-excavation and lead to settlement or sinkholes at the surface.

The KNE Fairfax Alignment would comply with regulatory and design requirements, as well as with project measure PM GEO-1, and construction of the alignment would not result in loss of soil stability. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.8.7.3.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. The KNE Fairfax Alignment RSA is located on relatively level or gently sloping ground. There are no mapped landslide-susceptible areas in the RSA.

As shown in Figure 3.8-2, part of the alignment is in a mapped liquefaction zone. Areas of historically high, shallow groundwater and loose, coarse-grained alluvial soils could cause seismic-induced liquefaction and settlement, including lateral spreading. Lateral spreading is a phenomenon where large blocks of intact soil move downslope in a rapid fluid-like movement as a result of liquefaction. The mass moves toward an unconfined area or free-face, such as a descending slope or stream-cut bluff, and can move on slope gradients as gentle as one degree. While the conditions for liquefaction potential are present in the RSA, the free-face condition required for inducement of lateral spreading is not present.

There are no known active or abandoned oil and gas wells in the KNE Fairfax Alignment RSA, and the alignment is not in an area of known land subsidence mapped by the USGS Areas of Land Subsidence in California (USGS n.d.).

Operation of the alignment would not exacerbate or cause conditions leading to landslides, liquefaction, lateral spreading, subsidence, or collapse. Implementation of project measure PM GEO-1 during design and construction would include design measures to stabilize soils, such as compaction grouting, compensation grouting, jet grouting, dynamic compaction, and stone columns, and operation of the alignment would not result in loss of soil stability. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.8.7.3.3 KNE LA BREA ALIGNMENT

3.8.7.3.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE La Brea Alignment would involve excavation for shafts and stations, temporary excavation support, tunneling, and dewatering that could affect soil stability and lead to ground movements (lateral or vertical) and subsidence. Dewatering to provide dry working conditions could affect soil stability by changing the in-situ soil stresses that can propagate to the surface and could manifest as surface settlement. Excavation for shafts and stations could negatively impact soil stability by reducing the self-support capacity of the retained soil and subsequently increase the loading demands on the temporary shoring. Furthermore, movement of temporary shoring could result in surface settlement and soil collapse. Tunneling with a TBM could cause volume loss through over-excavation and lead to settlement or sinkholes at the surface.

The KNE La Brea Alignment would comply with regulatory and design requirements, as well as with project measure PM GEO-1, and construction of the alignment would not result in loss of soil stability. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.8.7.3.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. The KNE La Brea Alignment RSA is located on relatively level or gently sloping ground. There are no mapped landslide-susceptible areas in the RSA.

As shown in Figure 3.8-2, part of the alignment is in a mapped liquefaction zone. Areas of historically high, shallow groundwater and loose, coarse-grained alluvial soils could cause seismic-induced liquefaction and settlement, including lateral spreading. Lateral spreading is a phenomenon where large blocks of intact soil move downslope in a rapid fluid-like movement as a result of liquefaction. The mass moves toward an unconfined area or free-face, such as a descending slope or stream-cut bluff, and can move on slope gradients as gentle as one degree. While the conditions for liquefaction potential are present in the RSA, the free-face condition required for inducement of lateral spreading is not present.

There are no known active or abandoned oil and gas wells in the KNE La Brea Alignment RSA, and the alignment is not in an area of known land subsidence mapped by the USGS Areas of Land Subsidence in California (USGS n.d.).

Operation of the alignment would not exacerbate or cause conditions leading to landslides, liquefaction, lateral spreading, subsidence, or collapse. Implementation of project measure PM GEO-1 during design and construction would include design measures to stabilize soils, such as compaction grouting, compensation grouting, jet grouting, dynamic compaction, and stone columns, and operation of the alignment would not result in loss of soil stability. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.8.7.3.4 HOLLYWOOD BOWL DESIGN OPTION

3.8.7.3.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the Hollywood Bowl Design Option would involve excavation for shafts and stations, temporary excavation support, tunneling, and dewatering that could affect soil stability and lead to ground movements (lateral or vertical) and subsidence. Dewatering to provide dry working conditions could affect soil stability by changing the in-situ soil stresses that can propagate to the surface and could manifest as surface settlement. Excavation for shafts and stations could negatively impact soil stability by reducing the self-support capacity of the retained soil and subsequently increase the loading demands on the temporary shoring. Furthermore, movement of temporary shoring could result in surface settlement and soil collapse. Tunnel construction using the sequential excavation method could cause volume loss through over-excavation and lead to settlement or sinkholes at the surface.

The design option would include altering a slope for construction of a staging area and ventilation shafts. Excavation into the slope could cause landslides on-site and off-site. However, all earthwork and grading activities would require grading permits from the Los Angeles Department of Buildings and Safety that include requirements and standards to limit impacts to acceptable levels. All on-site grading and site preparation must comply with applicable provisions of Chapter IX, Division 70 of the LAMC, which address grading, excavations, and fill, and the recommendations of a site-specific geotechnical report as required by the City of Los Angeles to evaluate soil issues. Furthermore, as part of project measure PM GEO-1, a geotechnical site investigation would be conducted at the site and recommendations would be given for support of the slope, which would minimize the potential for landslides on- or off-site.

The design option would comply with regulatory and design requirements, as well as with project measure PM GEO-1, and construction would not result in loss of soil stability. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.8.7.3.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. There are no mapped landslide-susceptible areas in the RSA of the Hollywood Bowl Design Option. As shown in Figure 3.8-2, part of the design option is in a mapped liquefaction zone. There are no known active or abandoned oil and gas wells in the design option RSA, which makes subsidence due to hydrocarbon extraction unlikely. Operation of the design option would not exacerbate or cause conditions leading to landslides, liquefaction, lateral spreading, subsidence, or collapse. Implementation of project measure PM GEO-1 would include design measures to stabilize soils, such as compaction grouting, compensation grouting, jet grouting, dynamic compaction, and stone columns, and operation of the design option would not result in loss of soil stability. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.8.7.3.5 MAINTENANCE AND STORAGE FACILITY

3.8.7.3.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction activities for the MSF would include excavation and grading for trackwork and foundations as well as associated utilities that could affect soil stability and lead to ground movements (lateral or vertical). Without compliance with regulatory and design requirements, these activities could result in loss of soil stability.

The MSF site is not in an area of mapped liquefaction or seismic landslide hazards. Furthermore, historically high groundwater elevations were 40 to 50 feet bgs, and the old alluvial deposits underlying the site are relatively dense, further reducing the potential for liquefaction.

The MSF site is on relatively level or gently sloping ground. No potential exists for landslides on- or off-site. No known active or abandoned oil and gas wells are located within the MSF RSA. Furthermore, the RSA is not in an area of known land subsidence mapped by USGS Areas of Land Subsidence in California (USGS n.d.).

As described above, the overall impact associated with soil stability that could result in landslides, lateral spreading, subsidence, liquefaction, or collapse would be minimal. Therefore, the MSF would have a less than significant impact during construction.

3.8.7.3.5.2 OPERATIONAL IMPACTS

No Impact. Operation of the MSF would not exacerbate or cause conditions leading to the occurrence of landslides, liquefaction, lateral spreading, subsidence, or collapse. In addition, implementation of project measure PM GEO-1 during design and construction would include soil stabilization. Therefore, the MSF would have no impact during operation.

3.8.7.4 IMPACT GEO-4: EXPANSIVE SOILS

Impact GEO-4: Would the project be located on expansive soil, as defined in Section 1803.5.3 of the CBC, creating substantial direct or indirect risks to life or property?

3.8.7.4.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.8.7.4.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The KNE San Vicente–Fairfax Alignment is located within areas of alluvial deposits that might contain expansive soils. Expansive soils are materials that undergo significant volume changes in response to relative changes in water content (wetting and drying). Expansive soils have a significant amount of clay particles, which can absorb, release, and hold water. The magnitude of volumetric changes depends on the amount of expansive minerals in the soil. Shrinking and swelling may result in the tilting of structures and differential settlements, and may exert stresses and damages (e.g., cracking) to pavements, underground utilities, and shallow foundations. Additionally, bedrock units underlying alluvial deposits, such as the Fernando Formation, that contain claystone could exhibit

expansive behavior if present in the shallow subsurface. Expansive soils and bedrock, if encountered within the shallow subsurface, could affect components of the alignment, primarily stations and other ancillary structures.

The alignment would be designed in conformance with the MRDC, CBC, and other applicable regulations and design standards. In accordance with MRDC Section 5.6.2 and project measure PM GEO-1, prior to construction, a comprehensive subsurface field and laboratory investigation program would be required to establish the subsurface conditions and geotechnical design parameters for final design and recommendations for construction. As part of the geotechnical explorations for final design, the presence, depths, and extents of expansive soils would be determined, and their expansive potential would be characterized. Therefore, the potential exists that expansive soils would be identified in the shallow subsurface, which could affect construction. However, per applicable regulations and design standards, soil remediation measures such as soil removal and replacement, chemical treatment, or structural enhancements would be implemented.

Design and construction recommendations to address impacts, if needed, would be incorporated into geotechnical design reports, as required by the MRDC. Compliance with such recommendations would ensure that expansive soil behavior does not pose a substantial direct or indirect risk to life or property during construction. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.8.7.4.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. As described above for construction impacts, the KNE San Vicente–Fairfax Alignment would be located within alluvial deposits that might contain expansive soil, which could affect components of the alignment, primarily stations and other ancillary structures.

The alignment would be designed in conformance with the MRDC, CBC, and other applicable regulations and design standards. In accordance with MRDC Section 5.6.2 and project measure PM GEO-1, a comprehensive subsurface field and laboratory investigation program will be required, as described above. There is the potential that expansive soils could be identified in the shallow subsurface that could affect operation. However, per applicable regulations and design standards, soil remediation measures such as soil removal and replacement, chemical treatment, or structural enhancements would be implemented.

Design and construction recommendations to address potential impacts, if needed, would be incorporated into the geotechnical design reports, as required by the MRDC. Compliance with such recommendations will ensure that expansive soil behavior will not pose a substantial direct or indirect risk to life or property during operation. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.8.7.4.2 KNE FAIRFAX ALIGNMENT

3.8.7.4.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The KNE Fairfax Alignment would be located within areas of alluvial deposits that might contain expansive soils. Expansive soils are materials that undergo significant volume changes in response to relative changes in water content (wetting and drying). Expansive soils have a significant amount of clay particles, which can absorb, release, and hold water. The magnitude of volumetric changes depends on the amount of expansive minerals in the soil. Shrinking and swelling may result in the tilting of structures and differential settlements, and may exert stresses and damages (e.g., cracking) to pavements, underground utilities, and shallow foundations. Additionally, bedrock units underlying alluvial deposits, such as the Fernando Formation, that contain claystone could exhibit expansive behavior if present in the shallow subsurface. Expansive soils and bedrock, if encountered within the shallow subsurface, could affect components of the alignment, primarily stations and other ancillary structures.

The alignment would be designed in conformance with the MRDC, CBC, and other applicable regulations and design standards. In accordance with MRDC Section 5.6.2 and project measure PM GEO-1, prior to construction, a comprehensive subsurface field and laboratory investigation program would be required to establish the subsurface conditions and geotechnical design parameters for final design and recommendations for construction. As part of the geotechnical explorations for final design, the presence, depths, and extents of expansive soils would be determined, and their expansive potential would be characterized. Therefore, the potential exists that expansive soils would be identified in the shallow subsurface, which could affect construction. However, per applicable regulations and design standards, soil remediation measures such as soil removal and replacement, chemical treatment, or structural enhancements would be implemented.

Design and construction recommendations to address impacts, if needed, would be incorporated into geotechnical design reports, as required by the MRDC. Compliance with such recommendations would ensure that expansive soil behavior does not pose a substantial direct or indirect risk to life or property during construction. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.8.7.4.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. As described above for construction impacts, the KNE Fairfax Alignment would be located within alluvial deposits that might contain expansive soil, which could affect components of the alignment, primarily stations and other ancillary structures.

The alignment would be designed in conformance with the MRDC, CBC, and other applicable regulations and design standards. In accordance with MRDC Section 5.6.2 and project measure PM GEO-1, a comprehensive subsurface field and laboratory investigation program will be required, as described above. There is the potential that expansive soils could be identified in the shallow subsurface that could affect operation. However, per applicable regulations and design standards, soil remediation measures

such as soil removal and replacement, chemical treatment, or structural enhancements would be implemented.

Design and construction recommendations to address potential impacts, if needed, would be incorporated into the geotechnical design reports, as required by the MRDC. Compliance with such recommendations will ensure that expansive soil behavior will not pose a substantial direct or indirect risk to life or property during operation. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.8.7.4.3 KNE LA BREA ALIGNMENT

3.8.7.4.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The KNE La Brea Alignment would be located within areas of alluvial deposits that might contain expansive soils. Expansive soils are materials that undergo significant volume changes in response to relative changes in water content (wetting and drying). Expansive soils have a significant amount of clay particles, which can absorb, release, and hold water. The magnitude of volumetric changes depends on the amount of expansive minerals in the soil. Shrinking and swelling may result in the tilting of structures and differential settlements, and may exert stresses and damages (e.g., cracking) to pavements, underground utilities, and shallow foundations. Additionally, bedrock units underlying alluvial deposits, such as the Fernando Formation, that contain claystone could exhibit expansive behavior if present in the shallow subsurface. Expansive soils and bedrock, if encountered within the shallow subsurface, could affect components of the alignment, primarily stations and other ancillary structures.

The alignment would be designed in conformance with the MRDC, CBC, and other applicable regulations and design standards. In accordance with MRDC Section 5.6.2 and project measure PM GEO-1, prior to construction, a comprehensive subsurface field and laboratory investigation program would be required to establish the subsurface conditions and geotechnical design parameters for final design and recommendations for construction. As part of the geotechnical explorations for final design, the presence, depths, and extents of expansive soils would be determined, and their expansive potential would be characterized. Therefore, the potential exists that expansive soils would be identified in the shallow subsurface, which could affect construction. However, per applicable regulations and design standards, soil remediation measures such as soil removal and replacement, chemical treatment, or structural enhancements would be implemented.

Design and construction recommendations to address impacts, if needed, would be incorporated into geotechnical design reports, as required by the MRDC. Compliance with such recommendations would ensure that expansive soil behavior does not pose a substantial direct or indirect risk to life or property during construction. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.8.7.4.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. As described above for construction impacts, the KNE La Brea Alignment would be located within alluvial deposits that might contain expansive soil, which could affect components of the alignment, primarily stations and other ancillary structures.

The alignment would be designed in conformance with the MRDC, CBC, and other applicable regulations and design standards. In accordance with MRDC Section 5.6.2 and project measure PM GEO-1, a comprehensive subsurface field and laboratory investigation program will be required, as described above. There is the potential that expansive soils could be identified in the shallow subsurface that could affect operation. However, per applicable regulations and design standards, soil remediation measures such as soil removal and replacement, chemical treatment, or structural enhancements would be implemented.

Design and construction recommendations to address potential impacts, if needed, would be incorporated into the geotechnical design reports, as required by the MRDC. Compliance with such recommendations will ensure that expansive soil behavior will not pose a substantial direct or indirect risk to life or property during operation. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.8.7.4.4 HOLLYWOOD BOWL DESIGN OPTION

3.8.7.4.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The Hollywood Bowl Design Option would be located within areas of old alluvial fan deposits, as well as tertiary-age bedrock of Topanga Group, and might be subjected to expansive soil behavior. Based on USDA rating, the surficial soils (i.e., upper five feet) in the eastern portion of the design option along Highland Avenue and Cahuenga Boulevard are classified as having low shrink-swell potential. This should be verified through site-specific exploration in subsequent design phases. At this preliminary stage, it is assumed that the design option would be subject to the effects of expansive soil behavior. Shrinking and swelling may result in the tilting of structures and differential settlements, and may exert stresses and damages (e.g., cracking) to pavements, underground utilities, and shallow foundations. Additionally, bedrock units underlying alluvial deposits that contain claystone could exhibit expansive behavior if present in the shallow subsurface. Expansive soils and bedrock, if encountered within the shallow subsurface, could affect components of the design option, primarily the station and other ancillary structures.

The design option would be designed in conformance with the MRDC, CBC, and other applicable regulations and design standards. In accordance with MRDC Section 5.6.2 and project measure PM GEO-1, prior to construction, a comprehensive subsurface field and laboratory investigation program would be required to establish the subsurface conditions and geotechnical design parameters for final design and recommendations for construction. As part of the geotechnical explorations for final design, the presence, depths, and extents of expansive soils would be determined, and their expansive potential would be characterized. Therefore, the potential exists that expansive soils would be identified in the shallow subsurface, which could affect construction. However, per applicable regulations and design

standards, soil remediation measures such as soil removal and replacement, chemical treatment, or structural enhancements would be implemented.

Design and construction recommendations to address impacts, if needed, would be incorporated into geotechnical design reports, as required by the MRDC. Compliance with such recommendations would ensure that expansive soil behavior does not pose a substantial direct or indirect risk to life or property during construction. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.8.7.4.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. As described above for construction impacts, the Hollywood Bowl Design Option would be located in areas that might contain expansive soil, which could affect components of the design option, primarily the station and other ancillary structures.

The design option would be designed in conformance with the MRDC, CBC, and other applicable regulations and design standards. In accordance with MRDC Section 5.6.2 and project measure PM GEO-1, a comprehensive subsurface field and laboratory investigation program will be required, as described above in the construction discussion. There is the potential that expansive soils could be identified in the shallow subsurface that could affect operation. However, per applicable regulations and design standards, soil remediation measures such as soil removal and replacement, chemical treatment, or structural enhancements would be implemented.

Design and construction recommendations to address potential impacts, if needed, would be incorporated into the geotechnical design reports, as required by the MRDC. Compliance with such recommendations will ensure that expansive soil behavior will not pose a substantial direct or indirect risk to life or property during operation. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.8.7.4.5 MAINTENANCE AND STORAGE FACILITY

3.8.7.4.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The MSF would be located within areas of alluvial deposits that might contain expansive soils. Expansive soils are materials that undergo significant volume changes in response to relative changes in water content (wetting and drying). Expansive soils have a significant amount of clay particles, which can absorb, release, and hold water. The magnitude of volumetric changes depends on the amount of expansive minerals in the soil. Shrinking and swelling may result in the tilting of structures and differential settlements.

The MSF would be designed in conformance with the MRDC, CBC, and other applicable regulations and design standards. In accordance with MRDC Section 5.6.2 and project measure PM GEO-1, prior to construction, a comprehensive subsurface field and laboratory investigation program would be required to establish the subsurface conditions and geotechnical design parameters for final design and recommendations for construction. As part of the geotechnical explorations for final design, the

presence, depths, and extents of expansive soils would be determined, and their expansive potential would be characterized. Therefore, the potential exists that expansive soils would be identified in the shallow subsurface, which could affect construction. However, per applicable regulations and design standards, soil remediation measures such as soil removal and replacement, chemical treatment, or structural enhancements would be implemented.

Design and construction recommendations to address impacts, if needed, would be incorporated into geotechnical design reports, as required by the MRDC. Compliance with such recommendations would ensure that expansive soil behavior does not pose a substantial direct or indirect risk to life or property during construction. Therefore, the MSF would have a less than significant impact during construction.

3.8.7.4.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. As described above for construction impacts, the MSF would be located within alluvial deposits that might contain expansive soil, which could affect several components of the MSF, such as buildings, newly installed utilities, trackwork, and other ancillary facilities.

The MSF would be designed in conformance with the MRDC, CBC, and other applicable regulations and design standards. In accordance with MRDC Section 5.6.2 and project measure PM GEO-1, a comprehensive subsurface field and laboratory investigation program will be required, as described above in the construction discussion. There is the potential that expansive soils could be identified in the shallow subsurface that could affect operation. However, per applicable regulations and design standards, soil remediation measures such as soil removal and replacement, chemical treatment, or structural enhancements would be implemented.

Design and construction recommendations to address potential impacts, if needed, would be incorporated into the geotechnical design reports, as required by the MRDC. Compliance with such recommendations will ensure that expansive soil behavior will not pose a substantial direct or indirect risk to life or property during operation. Therefore, the MSF would have a less than significant impact during operation.

3.8.7.5 IMPACT GEO-5: GEOLOGIC FEATURES

Impact GEO-5: Would the project directly or indirectly destroy a unique geologic feature?

3.8.7.5.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.8.7.5.1.1 CONSTRUCTION IMPACTS

No Impact. The KNE San Vicente–Fairfax Alignment would be located in a relatively flat, developed urban area and therefore is not anticipated to destroy, permanently cover, or adversely alter any unique or prominent geologic or topographic features such as hilltops, ridges, hillslopes, canyons, ravines, rock outcrops, water bodies, streambeds, and wetlands. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during construction.

3.8.7.5.1.2 OPERATIONAL IMPACTS

No Impact. The KNE San Vicente–Fairfax Alignment would be located in a relatively flat, developed urban area and therefore is not anticipated to destroy, permanently cover, or adversely alter any unique or prominent geologic or topographic features such as hilltops, ridges, hillslopes, canyons, ravines, rock outcrops, water bodies, streambeds, and wetlands. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during operation.

3.8.7.5.2 KNE FAIRFAX ALIGNMENT

3.8.7.5.2.1 CONSTRUCTION IMPACTS

No Impact. The KNE Fairfax Alignment would be located in a relatively flat, developed urban area and therefore is not anticipated to destroy, permanently cover, or adversely alter any unique or prominent geologic or topographic features such as hilltops, ridges, hillslopes, canyons, ravines, rock outcrops, water bodies, streambeds, and wetlands. Therefore, the KNE Fairfax Alignment would have no impact during construction.

3.8.7.5.2.2 OPERATIONAL IMPACTS

No Impact. The KNE Fairfax Alignment would be located in a relatively flat, developed urban area and therefore is not anticipated to destroy, permanently cover, or adversely alter any unique or prominent geologic or topographic features such as hilltops, ridges, hillslopes, canyons, ravines, rock outcrops, water bodies, streambeds, and wetlands. Therefore, the KNE Fairfax Alignment would have no impact during operation.

3.8.7.5.3 KNE LA BREA ALIGNMENT

3.8.7.5.3.1 CONSTRUCTION IMPACTS

No Impact. The KNE La Brea Alignment would be located in a relatively flat, developed urban area and therefore is not anticipated to destroy, permanently cover, or adversely alter any unique or prominent geologic or topographic features such as hilltops, ridges, hillslopes, canyons, ravines, rock outcrops, water bodies, streambeds, and wetlands. Therefore, the KNE La Brea Alignment would have no impact during construction.

3.8.7.5.3.2 OPERATIONAL IMPACTS

No Impact. The KNE La Brea Alignment would be located in a relatively flat, developed urban area and therefore is not anticipated to destroy, permanently cover, or adversely alter any unique or prominent geologic or topographic features such as hilltops, ridges, hillslopes, canyons, ravines, rock outcrops, water bodies, streambeds, and wetlands. Therefore, the KNE La Brea Alignment would have no impact during operation.

3.8.7.5.4 HOLLYWOOD BOWL DESIGN OPTION

3.8.7.5.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The Hollywood Bowl Design Option would alter a hillslope for construction of a ventilation shaft and construction staging area. However, the hillslope has been previously altered as part of construction of Cahuenga Boulevard and no rock outcrops are visible on the slope. The area of grading would be approximately 60 feet by 105 feet within a much larger hillslope. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.8.7.5.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. The Hollywood Bowl Design Option would alter a hillslope to install a ventilation shaft. However, the hillslope has been previously altered as part of construction of Cahuenga Boulevard and no rock outcrops are visible on the slope. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.8.7.5.5 MAINTENANCE AND STORAGE FACILITY

3.8.7.5.5.1 CONSTRUCTION IMPACTS

No Impact. The MSF site is in a relatively flat, developed urban area without unique or prominent geologic or topographic features, such as hilltops, ridges, hillslopes, canyons, ravines, rock outcrops, water bodies, streambeds, and wetlands, that could be destroyed, permanently covered, or adversely altered by construction. Therefore, the MSF would have no impact during construction.

3.8.7.5.5.2 OPERATIONAL IMPACTS

No Impact. The MSF site is in a relatively flat, developed urban area without unique or prominent geologic or topographic features, such as hilltops, ridges, hillslopes, canyons, ravines, rock outcrops, water bodies, streambeds, and wetlands, that could be destroyed, permanently covered, or adversely altered by operational activities. Therefore, the MSF would have no impact during operation.

3.8.7.6 IMPACT MR-1: MINERAL RESOURCES

Impact MR-1: Would the project result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?

3.8.7.6.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.8.7.6.1.1 CONSTRUCTION IMPACTS

The subsections below describe construction impacts on mineral resources related to non-fuel mineral resources and oil resources.

NON-FUEL MINERAL RESOURCES

No Impact. The KNE San Vicente–Fairfax Alignment lies within a highly urbanized area of Los Angeles County within the Cities of Los Angeles and West Hollywood. The portion of the alignment between its southern terminus at the existing Metro K Line Expo/Crenshaw Station and approximately the intersection of Fairfax Avenue with West 5th Street is within an area classified as MRZ-3, while the portion north of this location to its northern terminus (Hollywood/Highland Station) lies within an area classified as MRZ-1 (CGS 1994, 2021). The westernmost curve of the alignment (approximately between the Pacific Design Center at San Vicente Boulevard and the intersection of San Vicente Boulevard and Santa Monica Boulevard) appears to border or lie within a designated MRZ-3 area as well. Areas classified as MRZ-1 have little or no likelihood for the presence of significant mineral resources. Areas classified as MRZ-3 contain known mineral occurrences of undetermined significance. In addition, the alignment consists of urbanized areas that include commercial, residential, open spaces, public facilities, and light manufacturing land uses, which are unavailable for future mineral extraction. Based on the MRZ classifications, the alignment would not result in loss of a known non-fuel mineral resource that is of value to the region and the residents of the state. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during construction.

OIL RESOURCES

Less than Significant Impact. The KNE San Vicente–Fairfax Alignment would traverse the Las Cienegas, Salt Lake (South), Salt Lake, Beverly Hills, and Sherman (Abandoned) oil fields. Although several idle/plugged/dry wells are within the 300-foot RSA of the alignment, the only documented active wells are located at the Beverly Center, near the intersection of Beverly Boulevard and La Cienega Boulevard. LAMC 3.01 lays out the regulatory framework for oil drilling within the City of Los Angeles. Due to technological advancements in drilling and extraction techniques, oil wells do not need to be placed directly over the oil field. The alignment is not proposed to be at depths capable of disrupting the extraction activities of any active well. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

MINERAL RESOURCES CONSTRUCTION IMPACT CONCLUSION

Less than Significant Impact. Based on the impact evaluation described in the subsections above, the KNE San Vicente–Fairfax Alignment would have a less than significant impact overall related to the loss of availability of a known mineral resource that would be of value to the region and the residents of the state during construction.

3.8.7.6.1.2 OPERATIONAL IMPACTS

The subsections below describe operational impacts on mineral resources related to non-fuel mineral resources and oil resources.

NON-FUEL MINERAL RESOURCES

No Impact. The KNE San Vicente–Fairfax Alignment lies within a highly urbanized area of Los Angeles County within the Cities of Los Angeles and West Hollywood. The portion of the alignment between its southern terminus at the existing Metro K Line Expo/Crenshaw Station and approximately the intersection of Fairfax Avenue with West 5th Street is within an area classified as MRZ-3, while the portion north of this location to its northern terminus (Hollywood/Highland Station) lies within an area classified as MRZ-1 (CGS 1994, 2021). The westernmost curve of the alignment (approximately between the Pacific Design Center at San Vicente Boulevard and the intersection of San Vicente Boulevard and Santa Monica Boulevard) appears to border or lie within a designated MRZ-3 area as well. Areas classified as MRZ-1 have little or no likelihood for the presence of significant mineral resources. Areas classified as MRZ-3 contain known mineral occurrences of undetermined significance. In addition, the alignment consists of urbanized areas that include commercial, residential, open spaces, public facilities, and light manufacturing land uses, which are unavailable for future mineral extraction. Based on the MRZ classifications, the alignment would not result in loss of a known non-fuel mineral resource that is of value to the region and the residents of the state. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during operation.

OIL RESOURCES

Less than Significant Impact. The KNE San Vicente–Fairfax Alignment would traverse the Las Cienegas, Salt Lake (South), Salt Lake, Beverly Hills, and Sherman (Abandoned) oil fields. Although several idle/plugged/dry wells are within the 300-foot RSA of the alignment, the only documented active wells are located at the Beverly Center, near the intersection of Beverly Boulevard and La Cienega Boulevard. LAMC 3.01 lays out the regulatory framework for oil drilling within the City of Los Angeles. Due to technological advancements in drilling and extraction techniques, oil wells do not need to be placed directly over the oil field. The alignment is not proposed to be at depths capable of disrupting the extraction activities of any active well. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

MINERAL RESOURCES OPERATIONAL IMPACT CONCLUSION

Less than Significant Impact. Based on the impact evaluation described in the subsections above, the KNE San Vicente–Fairfax Alignment would have a less than significant impact overall related to the loss of availability of a known mineral resource that would be of value to the region and the residents of the state during operation.

3.8.7.6.2 KNE FAIRFAX ALIGNMENT

3.8.7.6.2.1 CONSTRUCTION IMPACTS

The subsections below describe construction impacts on mineral resources related to non-fuel mineral resources and oil resources.

NON-FUEL MINERAL RESOURCES

No Impact. The KNE Fairfax Alignment lies within a highly urbanized area of Los Angeles County within the Cities of Los Angeles and West Hollywood. The portion of the alignment between its southern terminus at the existing Metro K Line Expo/Crenshaw Station and approximately the intersection of Fairfax Avenue with 5th Street is within an area classified as MRZ-3, while the portion north of this location to its northern terminus (Hollywood/Highland Station) lies within an area classified as MRZ-1 (CGS 1994, 2021). Areas classified as MRZ-1 have little or no likelihood for the presence of significant mineral resources. Areas classified as MRZ-3 contain known mineral occurrences of undetermined significance. In addition, the alignment is in an urbanized area that includes commercial, residential, open spaces, public facilities, and light manufacturing, which are unavailable for future mineral extraction. Based on the MRZ classifications, the alignment would not result in loss of a known non-fuel mineral resource that is of value to the region and the residents of the state. Therefore, the KNE Fairfax Alignment would have no impact during construction.

OIL RESOURCES

No Impact. The KNE Fairfax Alignment would traverse the Las Cienegas, Salt Lake (South), Salt Lake, and Beverly Hills oil fields. There are several idle/plugged/dry wells within the 300-foot RSA of the alignment, but no active wells. LAMC 3.01 lays out the regulatory framework for oil drilling within the City of Los Angeles. Due to technological advancements in drilling and extraction techniques, oil wells do not need to be placed directly over the oil field. Therefore, the KNE Fairfax Alignment would have no impact during construction.

MINERAL RESOURCES CONSTRUCTION IMPACT CONCLUSION

No Impact. Based on the impact evaluation described in the subsections above, the KNE Fairfax Alignment would have no impact overall related to the loss of availability of a known mineral resource that would be of value to the region and the residents of the state during construction.

3.8.7.6.2.2 OPERATIONAL IMPACTS

The subsections below describe operational impacts on mineral resources related to non-fuel mineral resources and oil resources.

NON-FUEL MINERAL RESOURCES

No Impact. The KNE Fairfax Alignment lies within a highly urbanized area of Los Angeles County within the Cities of Los Angeles and West Hollywood. The portion of the alignment between its southern terminus at the existing Metro K Line Expo/Crenshaw Station and approximately the intersection of Fairfax Avenue with 5th Street is within an area classified as MRZ-3, while the portion north of this location to its northern terminus (Hollywood/Highland Station) lies within an area classified as MRZ-1 (CGS 1994, 2021). Areas classified as MRZ-1 have little or no likelihood for the presence of significant mineral resources. Areas classified as MRZ-3 contain known mineral occurrences of undetermined significance. In addition, the alignment is in an urbanized area that includes commercial, residential, open spaces, public facilities, and

light manufacturing, which are unavailable for future mineral extraction. Based on the MRZ classifications, the alignment would not result in loss of a known non-fuel mineral resource that is of value to the region and the residents of the state. Therefore, the KNE Fairfax Alignment would have no impact during operation.

OIL RESOURCES

No Impact. The KNE Fairfax Alignment would traverse the Las Cienegas, Salt Lake (South), Salt Lake, and Beverly Hills oil fields. There are several idle/plugged/dry wells within the 300-foot RSA of the alignment, but no active wells. LAMC 3.01 lays out the regulatory framework for oil drilling within the City of Los Angeles. Due to technological advancements in drilling and extraction techniques, oil wells do not need to be placed directly over the oil field. Therefore, the KNE Fairfax Alignment would have no impact during operation.

MINERAL RESOURCES OPERATIONAL IMPACT CONCLUSION

No Impact. Based on the impact evaluation described in the subsections above, the KNE Fairfax Alignment would have no impact overall related to the loss of availability of a known mineral resource that would be of value to the region and the residents of the state during operation.

3.8.7.6.3 KNE LA BREA ALIGNMENT

3.8.7.6.3.1 CONSTRUCTION IMPACTS

The subsections below describe construction impacts on mineral resources related to non-fuel mineral resources and oil resources.

NON-FUEL MINERAL RESOURCES

No Impact. The KNE La Brea Alignment lies within a highly urbanized area of Los Angeles County within the Cities of Los Angeles and West Hollywood. The portion of the alignment between its southern terminus at the existing Metro K Line Expo/Crenshaw Station and approximately the intersection of La Brea Avenue with 4th Street is within an area classified as MRZ-3, while the portion north of this location to its northern terminus (Hollywood/Highland Station) lies within an area classified as MRZ-1 (CGS 1994, 2021). Areas classified as MRZ-1 have little or no likelihood for the presence of significant mineral resources. Areas classified as MRZ-3 contain known mineral occurrences of undetermined significance. In addition, the alignment is in an urbanized area that includes commercial, residential, open spaces, public facilities, and light manufacturing, which are unavailable for future mineral extraction. Based on the MRZ classifications, the alignment would not result in a loss of a known non-fuel mineral resource that is of value to the region and the residents of the state. Therefore, the KNE La Brea Alignment would have no impact during construction.

OIL RESOURCES

No Impact. The KNE La Brea Alignment would traverse the Las Cienegas and Salt Lake oil fields. There are several idle/plugged/dry wells within the 300-foot RSA of the alignment, but no active wells. LAMC 3.01 lays out the regulatory framework for oil drilling within the City of Los Angeles. Due to technological advancements in drilling and extraction techniques, oil wells do not need to be placed directly over the oil field. Therefore, the KNE La Brea Alignment would have no impact during construction.

MINERAL RESOURCES CONSTRUCTION IMPACT CONCLUSION

No Impact. Based on the impact evaluation described in the subsections above, the KNE La Brea Alignment would have no impact overall related to the loss of availability of a known mineral resource that would be of value to the region and the residents of the state during construction.

3.8.7.6.3.2 OPERATIONAL IMPACTS

The subsections below describe operational impacts on mineral resources related to non-fuel mineral resources and oil resources.

NON-FUEL MINERAL RESOURCES

No Impact. The KNE La Brea Alignment lies within a highly urbanized area of Los Angeles County within the Cities of Los Angeles and West Hollywood. The portion of the alignment between its southern terminus at the existing Metro K Line Expo/Crenshaw Station and approximately the intersection of La Brea Avenue with 4th Street is within an area classified as MRZ-3, while the portion north of this location to its northern terminus (Hollywood/Highland Station) lies within an area classified as MRZ-1 (CGS 1994, 2021). Areas classified as MRZ-1 have little or no likelihood for the presence of significant mineral resources. Areas classified as MRZ-3 contain known mineral occurrences of undetermined significance. In addition, the alignment is in an urbanized area that includes commercial, residential, open spaces, public facilities, and light manufacturing, which are unavailable for future mineral extraction. Based on the MRZ classifications, the alignment would not result in a loss of a known non-fuel mineral resource that is of value to the region and the residents of the state. Therefore, the KNE La Brea Alignment would have no impact during operation.

OIL RESOURCES

No Impact. The KNE La Brea Alignment would traverse the Las Cienegas and Salt Lake oil fields. There are several idle/plugged/dry wells within the 300-foot RSA of the alignment, but no active wells. LAMC 3.01 lays out the regulatory framework for oil drilling within the City of Los Angeles. Due to technological advancements in drilling and extraction techniques, oil wells do not need to be placed directly over the oil field. Therefore, the KNE La Brea Alignment would have no impact during operation.

MINERAL RESOURCES OPERATIONAL IMPACT CONCLUSION

No Impact. Based on the impact evaluation described in the subsections above, the KNE La Brea Alignment would have no impact overall related to the loss of availability of a known mineral resource that would be of value to the region and the residents of the state during operation.

3.8.7.6.4 HOLLYWOOD BOWL DESIGN OPTION

3.8.7.6.4.1 CONSTRUCTION IMPACTS

The subsections below describe construction impacts on mineral resources related to non-fuel mineral resources and oil resources.

NON-FUEL MINERAL RESOURCES

No Impact. The Hollywood Bowl Design Option lies within an area classified as MRZ-1 south of the intersection of Highland Avenue with Milner Road and Camrose Drive, and an area classified as MRZ-3 north of this location to the Hollywood Bowl Station (CGS 1994, 2021). Areas classified as MRZ-1 have little or no likelihood for the presence of significant mineral resources. Areas classified as MRZ-3 contain known mineral occurrences of undetermined significance. In addition, the design option is in an urbanized area that includes commercial, residential, open spaces, and public facilities, which are unavailable for future mineral extraction. Based on the MRZ classifications, the design option would not result in loss of a known non-fuel mineral resource that is of value to the region and the residents of the state. Therefore, the Hollywood Bowl Design Option would have no impact during construction.

OIL RESOURCES

No Impact. No known oil fields or active, plugged, or idle oil/gas wells are located in the RSA of the Hollywood Bowl Design Option. Therefore, based on the available data, the design option would have no impact during construction.

MINERAL RESOURCES CONSTRUCTION IMPACT CONCLUSION

No Impact. Based on the impact evaluation described in the subsections above, the Hollywood Bowl Design Option would have no impact overall related to the loss of availability of a known mineral resource that would be of value to the region and the residents of the state during construction.

3.8.7.6.4.2 OPERATIONAL IMPACTS

The subsections below describe operational impacts on mineral resources related to non-fuel mineral resources and oil resources.

NON-FUEL MINERAL RESOURCES

No Impact. The Hollywood Bowl Design Option lies within an area classified as MRZ-1 south of the intersection of Highland Avenue with Milner Road and Camrose Drive, and an area classified as MRZ-3 north of this location to the Hollywood Bowl Station (CGS 1994, 2021). Areas classified as MRZ-1 have little or no likelihood for the presence of significant mineral resources. Areas classified as MRZ-3 contain known mineral occurrences of undetermined significance. In addition, the design option is in an urbanized area that includes commercial, residential, open spaces, and public facilities, which are unavailable for future mineral extraction. Based on the MRZ classifications, the design option would not result in loss of a known non-fuel mineral resource that is of

value to the region and the residents of the state. Therefore, the Hollywood Bowl Design Option would have no impact during operation.

OIL RESOURCES

No Impact. No known oil fields or active, plugged, or idle oil/gas wells are located in the RSA of the Hollywood Bowl Design Option. Therefore, based on the available data, the design option would have no impact during operation.

MINERAL RESOURCES OPERATIONAL IMPACT CONCLUSION

No Impact. Based on the impact evaluation described in the subsections above, the Hollywood Bowl Design Option would have no impact overall related to the loss of availability of a known mineral resource that would be of value to the region and the residents of the state during operation.

3.8.7.6.5 MAINTENANCE AND STORAGE FACILITY

3.8.7.6.5.1 CONSTRUCTION IMPACTS

The subsections below describe construction impacts on mineral resources related to non-fuel mineral resources and oil resources.

NON-FUEL MINERAL RESOURCES

No Impact. The MSF site is within an area classified as MRZ-1 (CGS 1994, 2021) that has little or no likelihood for the presence of significant mineral resources. No sand or gravel mines have been identified within the MSF RSA. In addition, the MSF site is within an urbanized area with light industrial land use. Based on this MRZ classification, the MSF would not result in loss of a known non-fuel mineral resource that is of value to the region and the residents of the state. Therefore, the MSF would have no impact during construction.

OIL RESOURCES

No Impact. No known oil fields or active, plugged, or idle oil/gas wells are located in the MSF RSA. Therefore, the MSF would have no impact during construction.

MINERAL RESOURCES CONSTRUCTION IMPACT CONCLUSION

No Impact. Based on the impact evaluation described in the subsections above, the MSF would have no impact overall related to the loss of availability of a known mineral resource that would be of value to the region and the residents of the state during construction.

3.8.7.6.5.2 OPERATIONAL IMPACTS

The subsections below describe operational impacts on mineral resources related to non-fuel mineral resources and oil resources.

NON-FUEL MINERAL RESOURCES

No Impact. The MSF site is within an area classified as MRZ-1 (CGS 1994, 2021) that has little or no likelihood for the presence of significant mineral resources. No sand or gravel mines have been identified within the MSF RSA. In addition, the MSF site is within an urbanized area with light industrial land use. Based on this MRZ classification, the MSF would not result in loss of a known non-fuel mineral resource that is of value to the region and the residents of the state. Therefore, the MSF would have no impact during operation.

OIL RESOURCES

No Impact. No known oil fields or active, plugged, or idle oil/gas wells are located in the MSF RSA. Therefore, the MSF would have no impact during operation.

MINERAL RESOURCES OPERATIONAL IMPACT CONCLUSION

No Impact. Based on the impact evaluation described in the subsections above, the MSF would have no impact overall related to the loss of availability of a known mineral resource that would be of value to the region and the residents of the state during operation.

3.8.7.7 IMPACT MR-2: MINERAL RESOURCE RECOVERY SITES

Impact MR-2: Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

3.8.7.7.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.8.7.7.1.1 CONSTRUCTION IMPACTS

No Impact. No known mineral resource recovery sites are identified in the RSA of the KNE San Vicente–Fairfax Alignment. The area is highly urbanized and consequently unavailable for future mineral extraction. No mineral resource recovery sites are delineated in the local general plans or other plans.

The alignment lies within the highly urbanized areas of the Cities of Los Angeles and West Hollywood. In addition, the City of Los Angeles Oil and Gas Drilling Ordinance, which became effective on January 18, 2023, prohibits new oil and gas extraction, and deems existing extraction activities a nonconforming use across all zones. In addition, the ordinance states that the City of Los Angeles does not consider petroleum to be a mineral source of local importance. The City of West Hollywood General Plan Final Environmental Impact Report states that no state-designated or locally designated MRZs exist in the city. Construction of the alignment would not result in the loss of availability of a locally important oil resource recovery site. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during construction.

3.8.7.7.1.2 OPERATIONAL IMPACTS

No Impact. No known mineral resource recovery sites are identified in the RSA of the KNE San Vicente–Fairfax Alignment. The area is highly urbanized and consequently unavailable for future mineral extraction. No mineral resource recovery sites are delineated in the local general plans or other plans.

The alignment lies within the highly urbanized areas of the Cities of Los Angeles and West Hollywood. In addition, the City of Los Angeles Oil and Gas Drilling Ordinance, which became effective on January 18, 2023, prohibits new oil and gas extraction, and deems existing extraction activities a nonconforming use across all zones. In addition, the ordinance states that the City of Los Angeles does not consider petroleum to be a mineral source of local importance. The City of West Hollywood General Plan Final Environmental Impact Report states that no state-designated or locally designated MRZs exist in the city. Operation of the alignment would not result in the loss of availability of a locally important oil resource recovery site. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during operation.

3.8.7.7.2 KNE FAIRFAX ALIGNMENT

3.8.7.7.2.1 CONSTRUCTION IMPACTS

No Impact. No known mineral resource recovery sites are identified in the RSA of the KNE Fairfax Alignment. The area is highly urbanized and consequently unavailable for future mineral extraction. No mineral resource recovery sites are delineated in the local general plans or other plans.

The alignment lies within the highly urbanized areas of the Cities of Los Angeles and West Hollywood. In addition, the City of Los Angeles Oil and Gas Drilling Ordinance, which became effective on January 18, 2023, prohibits new oil and gas extraction, and deems existing extraction activities a nonconforming use across all zones. In addition, the ordinance states that the City of Los Angeles does not consider petroleum to be a mineral source of local importance. The City of West Hollywood General Plan Final Environmental Impact Report states that no state-designated or locally designated MRZs exist in the city. Construction of the alignment would not result in the loss of availability of a locally important oil resource recovery site. Therefore, the KNE Fairfax Alignment would have no impact during construction.

3.8.7.7.2.2 OPERATIONAL IMPACTS

No Impact. No known mineral resource recovery sites are identified in the RSA of the KNE Fairfax Alignment. The area is highly urbanized and consequently unavailable for future mineral extraction. No mineral resource recovery sites are delineated in the local general plans or other plans.

The alignment lies within the highly urbanized areas of the Cities of Los Angeles and West Hollywood. In addition, the City of Los Angeles Oil and Gas Drilling Ordinance, which became effective on January 18, 2023, prohibits new oil and gas extraction, and deems existing extraction activities a nonconforming use across all zones. In addition, the ordinance states that the City of Los Angeles does not consider petroleum to be a mineral source of local importance. The City of West Hollywood General Plan Final Environmental Impact Report states that no state-designated or locally designated MRZs exist in the city.

Operation of the alignment would not result in the loss of availability of a locally important oil resource recovery site. Therefore, the KNE Fairfax Alignment would have no impact during operation.

3.8.7.7.3 KNE LA BREA ALIGNMENT

3.8.7.7.3.1 CONSTRUCTION IMPACTS

No Impact. No known mineral resource recovery sites are identified in the RSA of the KNE La Brea Alignment. The area is highly urbanized and consequently unavailable for future mineral extraction. No mineral resource recovery sites are delineated in the local general plans or other plans.

The alignment lies within the highly urbanized areas of the Cities of Los Angeles and West Hollywood. In addition, the City of Los Angeles Oil and Gas Drilling Ordinance, which became effective on January 18, 2023, prohibits new oil and gas extraction, and deems existing extraction activities a nonconforming use across all zones. In addition, the ordinance states that the City of Los Angeles does not consider petroleum to be a mineral source of local importance. The City of West Hollywood General Plan Final Environmental Impact Report states that no state-designated or locally designated MRZs exist in the city. Construction of the alignment would not result in the loss of availability of a locally important oil resource recovery site. Therefore, the KNE La Brea Alignment would have no impact during construction.

3.8.7.7.3.2 OPERATIONAL IMPACTS

No Impact. No known mineral resource recovery sites are identified in the RSA of the KNE La Brea Alignment. The area is highly urbanized and consequently unavailable for future mineral extraction. No mineral resource recovery sites are delineated in the local general plans or other plans.

The alignment lies within the highly urbanized areas of the Cities of Los Angeles and West Hollywood. In addition, the City of Los Angeles Oil and Gas Drilling Ordinance, which became effective on January 18, 2023, prohibits new oil and gas extraction, and deems existing extraction activities a nonconforming use across all zones. In addition, the ordinance states that the City of Los Angeles does not consider petroleum to be a mineral source of local importance. The City of West Hollywood General Plan Final Environmental Impact Report states that no state-designated or locally designated MRZs exist in the city. Operation of the alignment would not result in the loss of availability of a locally important oil resource recovery site. Therefore, the KNE La Brea Alignment would have no impact during operation.

3.8.7.7.4 HOLLYWOOD BOWL DESIGN OPTION

3.8.7.7.4.1 CONSTRUCTION IMPACTS

No Impact. No known mineral resource recovery sites are identified in the RSA of the Hollywood Bowl Design Option. The area is highly urbanized and consequently unavailable for future mineral extraction. No mineral resource recovery sites are delineated in the local general plans or other plans.

The design option lies within a highly urbanized area of the City of Los Angeles. In addition, the City of Los Angeles Oil and Gas Drilling Ordinance, which became effective on January 18, 2023, prohibits new oil and gas extraction, and deems existing extraction activities a nonconforming use across all zones. In

addition, the ordinance states that the City of Los Angeles does not consider petroleum to be a mineral source of local importance. Construction of the design option would not result in the loss of availability of a locally important oil resource recovery site. Therefore, the Hollywood Bowl Design Option would have no impact during construction.

3.8.7.7.4.2 OPERATIONAL IMPACTS

No Impact. No known mineral resource recovery sites are identified in the RSA of the Hollywood Bowl Design Option. The area is highly urbanized and consequently unavailable for future mineral extraction. No mineral resource recovery sites are delineated in the local general plans or other plans.

The design option lies within a highly urbanized area of the City of Los Angeles. In addition, the City of Los Angeles Oil and Gas Drilling Ordinance, which became effective on January 18, 2023, prohibits new oil and gas extraction, and deems existing extraction activities a nonconforming use across all zones. In addition, the ordinance states that the City of Los Angeles does not consider petroleum to be a mineral source of local importance. Operation of the design option would not result in the loss of availability of a locally important oil resource recovery site. Therefore, the Hollywood Bowl Design Option would have no impact during operation.

3.8.7.7.5 MAINTENANCE AND STORAGE FACILITY

3.8.7.7.5.1 CONSTRUCTION IMPACTS

No Impact. No known mineral resource recovery sites are identified in the RSA of the MSF. The area is highly urbanized and consequently unavailable for future mineral extraction. No mineral resource recovery sites are delineated in the local general plans or other plans.

The MSF lies within a highly urbanized area of the City of Los Angeles. In addition, the City of Los Angeles Oil and Gas Drilling Ordinance, which became effective on January 18, 2023, prohibits new oil and gas extraction, and deems existing extraction activities a nonconforming use across all zones. In addition, the ordinance states that the City of Los Angeles does not consider petroleum to be a mineral source of local importance. Construction of the MSF would not result in the loss of availability of a locally important oil resource recovery site. Therefore, the MSF would have no impact during construction.

3.8.7.7.5.2 OPERATIONAL IMPACTS

No Impact. No known mineral resource recovery sites are identified in the RSA of the MSF. The area is highly urbanized and consequently unavailable for future mineral extraction. No mineral resource recovery sites are delineated in the local general plans or other plans.

The MSF lies within a highly urbanized area of the City of Los Angeles. In addition, the City of Los Angeles Oil and Gas Drilling Ordinance, which became effective on January 18, 2023, prohibits new oil and gas extraction, and deems existing extraction activities a nonconforming use across all zones. In addition, the ordinance states that the City of Los Angeles does not consider petroleum to be a mineral source of local importance. Operation of the MSF would not result in the loss of availability of a locally important oil resource recovery site. Therefore, the MSF would have no impact during operation.

3.8.7.8 MITIGATION MEASURES

As the impact analysis above demonstrates, construction and operation of any of the KNE alignments and stations, the design option, and the MSF would result in no impact or a less than significant impact related to geology, soils, and mineral resources. Therefore, no mitigation is required under CEQA.

3.8.7.9 SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

Table 3.8-1 summarizes the geology, soils, and mineral resources impact significance conclusions and applicable mitigation measures. As indicated above, there are no significant impacts that would require mitigation.

TABLE 3.8-1. KNE SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

IMPACT		IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES				
		KNE SAN VICENTE-FAIRFAX ALIGNMENT	KNE FAIRFAX ALIGNMENT	KNE LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MAINTENANCE AND STORAGE FACILITY
Impact GEO-1: Exposure to Seismic Hazards	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS. Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
Impact GEO-2: Soil Erosion	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
Impact GEO-3: Soil Stability	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: No Impact
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: No Impact
Impact GEO-4: Expansive Soils	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS

IMPACT		IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES				
		KNE SAN VICENTE-FAIRFAX ALIGNMENT	KNE FAIRFAX ALIGNMENT	KNE LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MAINTENANCE AND STORAGE FACILITY
Impact GEO-5: Geologic Features	Impact Before Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: LTS Operation: LTS	Construction: No Impact Operation: No Impact
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: LTS Operation: LTS	Construction: No Impact Operation: No Impact
Impact MR-1: Mineral Resources	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact
Impact MR-2: Mineral Resource Recovery Sites	Impact Before Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact

Source: Connect Los Angeles Partners 2024
LTS = less than significant

3.9 GREENHOUSE GAS EMISSIONS

3.9.1 INTRODUCTION

This discussion provides an evaluation of K Line Northern Extension (KNE) as it relates to greenhouse gas (GHG) emissions. It includes descriptions of the federal, state, and local regulatory setting, existing conditions, and the impacts from construction and operation of the proposed alignments and stations, design option, and maintenance and storage facility (MSF), as well as mitigation measures where applicable. For more detailed information, refer to the KNE Greenhouse Gas Emissions Technical Report (Appendix 3.9-A).

3.9.2 REGULATORY FRAMEWORK

3.9.2.1 FEDERAL

The Clean Air Act of 1970 (CAA) and subsequent amendments regulate air emissions from stationary and mobile sources. A 2007 United States Supreme Court ruling (Massachusetts et al. v. Environmental Protection Agency et al. [U.S. Supreme Court No. 05–1120]) found that GHGs are air pollutants under the CAA and can be regulated by the U.S. Environmental Protection Agency (USEPA). On December 7, 2009, the Final Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the CAA was signed by the USEPA administrator. The endangerment finding states that current and projected concentrations of the six key well-mixed GHGs in the atmosphere—carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFC), perfluorocarbons, and sulfur hexafluoride—threaten the public health and welfare of current and future generations. Furthermore, it states that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that threatens public health and welfare (USEPA 2023). The endangerment finding did not impose any requirements on industry or other entities, but it was a prerequisite for implementing GHG emissions standards for vehicles.

The following federal laws and regulations are relevant to construction and operation of the project:

- Corporate Average Fuel Economy and GHG Emissions Standards for Vehicles
- Safer Affordable Fuel-Efficient Vehicles Rule
- Emissions Standards for Construction Equipment
- United States Department of Transportation Climate Action Plan
- Federal Transit Administration Climate Change Adaptation Initiative
- Federal Highway Administration Carbon Reduction Program

3.9.2.2 STATE

The following state laws and regulations are relevant to construction and operation of the project:

- Assembly Bill 1493, California Advanced Clean Cars Program
- Executive Order S-3-05, GHG Emissions Reduction Targets
- Assembly Bill 32, Global Warming Solutions Act of 2006
- Executive Order S-01-07, Low Carbon Fuel Standard
- Senate Bill (SB) 375, Sustainable Communities and Climate Protection Act of 2008
- Executive Order S-13-08, Sea Level Rise
- Executive Order B-30-15 and Senate Bill 350, New GHG Emissions Reduction Targets
- Senate Bill 32, Extending the Global Warming Solutions Act of 2006
- 2017 Assembly Bill (AB) 32 Climate Change Scoping Plan (2017 AB 32 Scoping Plan)
- Senate Bill 100, 100 Percent Clean Energy Act of 2018
- California Climate Investments Program
- Executive Order N-19-19
- Executive Order N-79-20
- California Advanced Clean Cars II Program
- California State Transportation Agency (CalSTA) Climate Action Plan for Transportation Infrastructure (CAPTI)
- 2022 Assembly Bill 32 Scoping Plan for Achieving Carbon Neutrality (2022 AB 32 Scoping Plan)

3.9.2.3 REGIONAL

The following regional plans and regulations are relevant to construction and operation of the project:

- Policy on Global Warming and Stratospheric Ozone Depletion, South Coast Air Quality Management District (SCAQMD)
- Interim California Environmental Quality Act (CEQA) GHG Significance Threshold for Stationary Sources, Rules and Plans, SCAQMD

3.9.2.3.1 SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

The Southern California Association of Governments (SCAG) is the Metropolitan Planning Organization for the six-county region that includes Los Angeles, Orange, Riverside, Ventura, San Bernardino, and Imperial Counties. Every four years SCAG updates Connect SoCal, its Regional Transportation Plan/Sustainable Communities Strategies (RTP/SCS), which meets federal and state requirements for infrastructure and sustainable planning. The latest adopted version of Connect SoCal, the 2020 RTP/SCS, includes a strong commitment to reduce emissions from transportation sources to comply with SB 375. The 2020 RTP/SCS charts a course for closely integrating land use and transportation

planning, including in areas labeled as High Quality Transit Areas, which reflect areas with rail transit service or bus service where lines have peak headways of less than 15 minutes. Major themes in the 2020 RTP/SCS that are relevant to the project include integrating strategies for land use and transportation, striving for sustainability, protecting and preserving the existing transportation infrastructure, increasing capacity through improved system management, and giving people more transportation choice (SCAG 2020).

3.9.2.4 LOCAL

Metro has implemented a robust sustainability program since 2007. The following plans and policies are relevant to construction and operation of the project:

- Metro Sustainability Implementation Plan (2008)
- Metro Green Construction Policy (2011, updated in 2018)
- Metro Countywide Sustainability Planning Policy (2012)
- Metro Rail Design Criteria (2017)
- Metro Vision 2028 Strategic Plan (2018a)
- Metro Systemwide Station Design Standards Policy (2018b)
- Climate Action and Adaptation Plan (CAAP) (2019)
- Moving Beyond Sustainability Strategic Plan (MBSSP) (2020)

Los Angeles County, the City of Los Angeles, and the City of West Hollywood have climate action plans, general plan policies, ordinances, and municipal codes pertaining to GHG emissions. All the climate action plans, including the Community Climate Action Plan (CCAP) of the Los Angeles County 2035 General Plan (soon to be replaced by the Los Angeles County Climate Action Plan, scheduled for adoption in March 2024), the City of Los Angeles' Sustainable City pLAn (2015) and LA's Green New Deal (the updated version of the pLAn, 2019), and the City of West Hollywood's WeHo Climate Action Plan (2021), identify initiatives and policies to reduce GHG emissions and encourage public transportation and transit, which would support GHG emission reductions.

3.9.3 METHODOLOGY

3.9.3.1 CEQA METHODOLOGY

The purpose of this analysis is to evaluate the project against CEQA thresholds of significance as the basis for determining the level of impacts related to GHG emissions.

3.9.3.1.1 CONSTRUCTION IMPACTS

3.9.3.1.1.1 EMISSION BURDEN ANALYSIS

An assessment of the GHG construction impacts of the project was conducted using staging information, estimated construction schedule, and construction equipment usage details. Major

construction activities for KNE would include surveys and preconstruction; tunnel construction; utility relocation and installation work; station, crossover, and connection box construction; storage track or MSF construction; street restoration; ventilation and emergency egress construction; systems installation and facilities, including trackbed, rail, third rail, conduit, electrical substation, and communications and signaling construction; and construction of other ancillary facilities. During each phase of construction, GHG emissions would be generated from heavy-duty construction equipment, worker travel to and from the project site, and material import and export using haul trucks, delivery trucks, and cement trucks.

This assessment used emission factors from the California Air Resources Board (CARB) model for off-road vehicle and equipment emissions (OFFROAD), as well as the CARB model for on-road vehicle emissions (EMission FACtor [EMFAC]). For off-road vehicles and equipment, South Coast Air Basin-specific OFFROAD2021 emission factors, along with project-specific information on pieces of equipment for each construction phase, were used. In addition, specific pieces of equipment are required to meet Tier 4 final emission standards, which are USEPA's most stringent emissions standards for engines. Tier 4 standards were modeled based on the procedures outlined in the California Emissions Estimator Model (CalEEMod) program. Types of project construction equipment required to meet USEPA's Tier 4 final emission standards when used for surface operations include:

- Crane
- Loader
- Excavator
- Telehandler
- Bore/drill rig
- Front end loader
- Welding plant
- Sweeper/scrubber

Equipment that would be used for specific subsurface operations was modeled as Tier 2. Higher-tiered equipment has not been approved for use by the Mining Safety and Health Administration for specific subsurface operations. This equipment includes:

- Excavator
- Loader
- Rubber-tired dozer
- Segment hauler

Tier-specific emission rates were obtained from CalEEMod. Fleet average emission rates from CARB's OFFROAD2021 model for the South Coast Air Basin were assumed to be representative for all other pieces of equipment. Emission rates for 2041, the first anticipated year of construction for any project element, were conservatively used to represent the fleet average equipment.

Worker commute, haul truck, delivery truck, and cement truck trip emissions factors were estimated using the EMFAC2021 (v.1.0.2) emission factor model for the Los Angeles County region, aggregated for all model years, all fuel types, and annual average for season in each of the calendar years from 2041 through 2050.

Using these various data sources, daily and annual construction emission levels were developed. Consistent with SCAQMD's Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans (SCAQMD 2008), construction emissions were amortized over 30 years and considered with operational emissions. As described in Section 3.9.3.2, SCAQMD's recommendations regarding quantification of GHG emissions have been followed for the project even though there are no quantitative GHG significance thresholds applicable to the project.

The MBSSP and updated Metro Green Construction Policy require the use of renewable diesel fuel if reasonably available in the vicinity of the project. Emissions benefits associated with this measure were not included in the analysis because renewable diesel emits air pollutants at the same rate as traditional diesel fuel.

3.9.3.1.2 OPERATIONAL IMPACTS

3.9.3.1.2.1 REGIONAL ROADWAY EMISSIONS ANALYSIS

The regional emission burden analysis determines a project's overall impact on GHG emissions. For KNE, an analysis was conducted based upon forecasted vehicle miles traveled (VMT) with and without the project. The regional emissions analysis was conducted for existing conditions, the 2045 without Project Conditions, and the 2045 with Project Conditions for the alignments. The year 2045 is used as the future year for analysis purposes in order to facilitate consistency with other regional planning processes. The Metro Corridor Based Model 2018c forecasts that the Hollywood Bowl Design Option would not contribute to a meaningful change in regional VMT, and no additional emissions analyses were conducted. Emission factors were obtained from CARB's EMFAC2021 using parameters set within the program for the SCAQMD, including the regional mix of vehicle type, vehicle age, and vehicle speeds.

3.9.3.1.2.2 LIGHT RAIL VEHICLE OPERATIONS EMISSIONS ANALYSIS

The project would require electrical power for vehicle propulsion, and the remote generation of this power would result in increased GHG emissions. To determine the increased GHG burden, CalEEMod program emission factors for the Southern California Edison (SCE) utility provider were multiplied by the estimated power demand for the project. CalEEMod uses SCE carbon intensity factors based on SCE's 2019 clean energy portfolio: 390.98 pounds per megawatt-hour (lb/MWhr) for CO_2, 0.033 lb/MWhr for CH_4, and 0.004 lb/MWhr for N_2O. Approximately 52 percent of SCE's total energy generation in 2019 was from renewable sources. The presented emissions from electricity production are conservative because it is expected that these levels will approach zero in the future due to the state's Renewables Portfolio Standard program, which requires all of the state's electricity to come from carbon-free resources by 2045.

3.9.3.1.2.3 STATION OPERATIONS EMISSIONS ANALYSIS

The project would require electrical power for station operation, and the remote generation of this power would result in increased GHG emissions. Estimates of GHG emissions that would be generated by sources involved in operation of the light rail stations were quantified using the CalEEMod Version 2020.4.0. Each station was represented by a 13,800-square-foot enclosed facility with an elevator and escalator access. CalEEMod uses default assumptions to estimate electricity use and applies the carbon intensity factors associated with SCE's 2019 clean energy portfolio. The presented emissions from electricity production are conservative because it is expected that these levels will approach zero in the future due to the state's Renewables Portfolio Standard program, which requires all of the state's electricity to come from carbon-free resources by 2045.

3.9.3.1.2.4 MSF OPERATIONS EMISSIONS ANALYSIS

Project activities associated with the MSF would occur in two parts, concurrent with Section 1 and Section 2 of each alignment.[1] Concurrently with Section 1 of the alignments, MSF facility construction would include the addition of four storage tracks to the existing Division 16 site to accommodate increased light rail vehicles (LRV) storage. Concurrently with Section 2 of the alignments, MSF facilities constructed would include expansion of the existing Division 16 MSF on the adjacent 16.5-acre site, comprising approximately 57,380 square feet of facility structures. No MSF construction would occur concurrently with Section 3 of the KNE San Vicente–Fairfax Alignment.

Operation of the MSF additions would result in GHG emissions associated with vehicle trips to and from the facility, electricity and natural gas usage, water and wastewater conveyance, and solid waste disposal. Estimates of GHG emissions that would be generated by sources involved in operation of the MSF additions were quantified using the CalEEMod Version 2020.4.0. CalEEMod uses default assumptions to estimate electricity, natural gas, water, and solid waste needs. The presented emissions from electricity production are conservative because it is expected that these levels will approach zero in the future due to the state's Renewables Portfolio Standard program, which requires all of the state's electricity to come from carbon-free resources by 2045. Non-electric sources of GHGs would not be affected by this requirement. Employee commute trips associated with the MSF are included in the regional VMT projections used to evaluate the change in regional vehicle emissions resulting from KNE.

[1] As discussed in Section 2.4.6, Construction Sections, of Chapter 2, KNE would be constructed in either two sections (for the KNE Fairfax and La Brea Alignments) or three sections (for the KNE San Vicente–Fairfax Alignment), referred to as Section 1, Section 2, and Section 3. Together these comprise KNE. This report provides an analysis of KNE (i.e., completion of Section 1, Section 2, and Section 3).

3.9.3.2 SIGNIFICANCE THRESHOLDS

In accordance with Appendix G of the 2022 CEQA Guidelines, the project would have a significant impact related to GHG emissions if it would:

- Impact GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Section 15064.4 of the CEQA Guidelines requires the lead agency to make a good faith effort to describe, calculate, or estimate the GHG emissions resulting from a proposed project but leaves the methodology to the discretion of the lead agency as long as it is supported by substantial evidence. Per Section 15064.4, the following factors should be considered when determining the significance of impacts from GHG emissions on the environment:

- Increase or decrease in GHG emissions resulting from the proposed project compared to the existing setting
- Exceedance of any threshold of significance determined to apply to the proposed project
- Compliance with applicable plans, policies, or regulations

Additionally, Section 15064.4 of the CEQA Guidelines clarifies that the lead agency should consider whether a project's incremental contribution to the effects of climate change would be cumulatively considerable when determining significance. By nature, GHGs persist in the atmosphere for long periods and build up over time. Regional and global effects of climate change are a result of combined GHG concentrations in the atmosphere. As a result, individual project-level GHG emissions must be considered together and in conjunction with existing GHG levels and reasonably foreseeable future GHG emissions when assessing project-level GHG impacts.

In a CEQA analysis, project-related impacts are typically compared to existing (without project) conditions. However, pursuant to CEQA Guidelines Section 15125(a)(2), a lead agency may exclusively use a future conditions baseline for the purposes of determination of significance under CEQA in instances where showing an existing conditions analysis would be misleading or without informational value. Use of an existing conditions baseline would be misleading for the project because it ignores the regional background growth in population, traffic, and transportation infrastructure that would occur between the 2019 existing conditions baseline year and the 2045 horizon year for the travel demand forecasting (i.e., the 2019 existing conditions will be substantially altered by regional growth that will occur independent of the project, which, in turn, would mask the impacts that are attributable to the project and would not provide an accurate and meaningful representation of project-related impacts). The consideration of regional background growth is critical when determining future effects for transit projects designed to reduce traffic congestion and associated GHG impacts over time. Isolating the project's impacts from other regional changes in the environment would result in a misleading analysis. Therefore, for the quantification of GHG emissions, project emissions will be defined as the difference between the project (2045) and the existing conditions in 2019 adjusted for regional

growth (i.e., the projected future conditions baseline) that would occur by 2045. In this case, the projected future conditions baseline is the 2045 without Project Conditions.

SCAQMD adopted its Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans on December 5, 2008 (SCAQMD 2008). SCAQMD's interim guidance recommends a tiered approach to determining significance for GHG emissions, and states that the GHG emissions analysis should include direct, indirect, and if possible, life-cycle emissions during construction and operation. A significance threshold for stationary source/industrial projects, which includes construction emissions amortized over 30 years and added to operational GHG emissions, is included in the guidance. SCAQMD has not established a transportation-specific threshold of significance for GHG emissions. As a result, SCAQMD's recommendations regarding quantification of emissions have been followed for the project, but a quantitative threshold was not used to analyze GHG emission impacts. GHG emissions are presented in units of carbon dioxide equivalent (CO_2e).

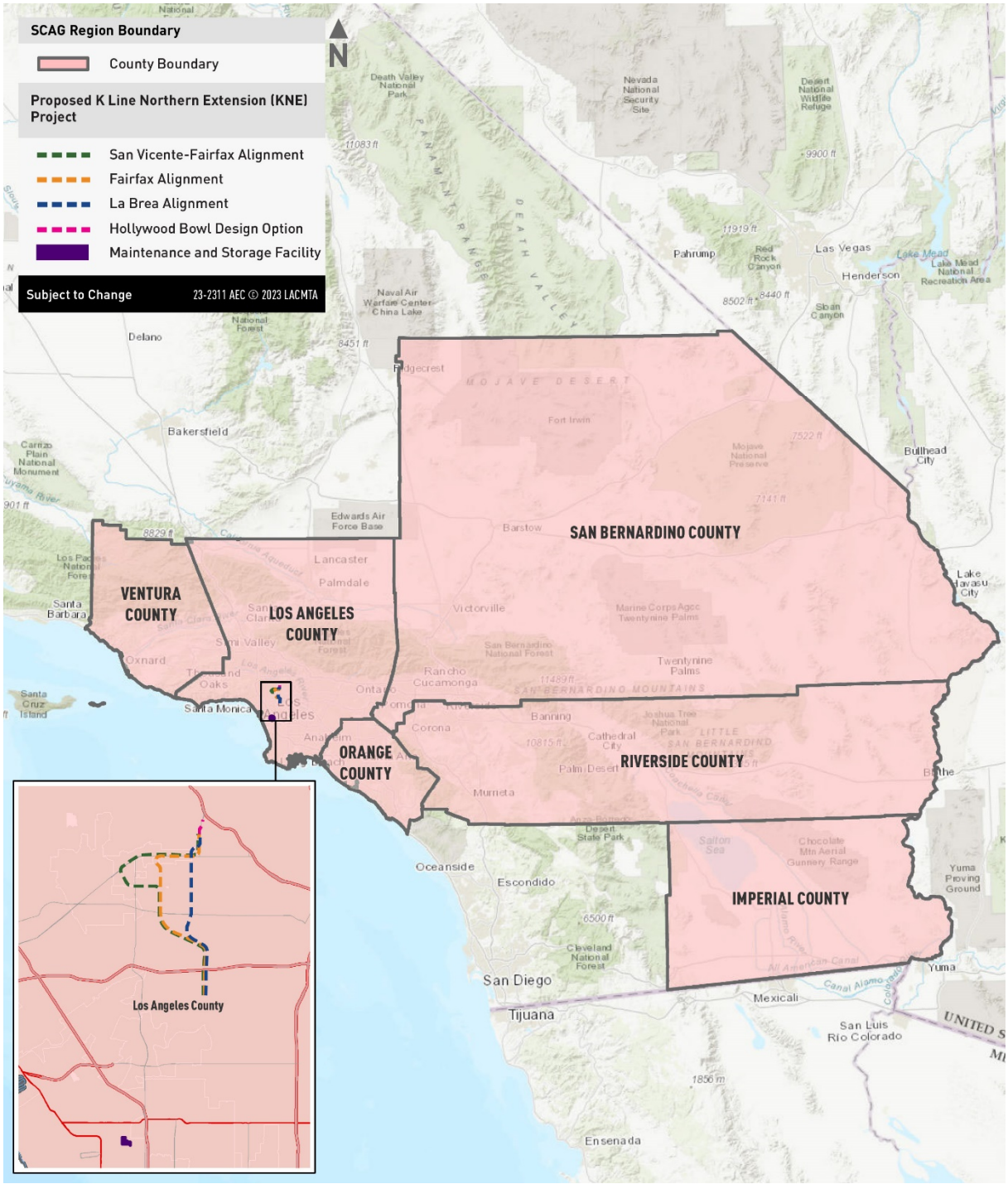
The Governor's Office of Planning and Research (OPR) released technical advisories for the streamlined review of transportation projects under CEQA in 2018 and 2021 (OPR 2018, 2021). In these advisories, OPR acknowledges the benefits of certain types of transportation projects (including light rail projects) that would reduce VMT and recommends the streamlining of GHG emissions impact analyses for these projects because they would reduce GHG emissions, improve and increase multimodal transportation networks, and facilitate mixed-use development. OPR does not propose a quantitative threshold for determining significance under CEQA, but OPR's recommendations will be considered when assessing significance for the project.

As recommended in the CEQA Guidelines and SCAQMD's interim guidance, estimated GHG emissions associated with construction and operation of the project were quantified and considered in impact determinations. Since no applicable quantitative GHG significance thresholds have been established, estimated GHG emissions associated with the project were assessed qualitatively in accordance with the referenced guidance.

3.9.4 RESOURCE STUDY AREA

As shown in Figure 3.9-1, the resource study area (RSA) for GHG emissions impacts is defined as the SCAG region, which encompasses Los Angeles, Orange, Riverside, Ventura, San Bernardino, and Imperial Counties. The RSA was defined by the GHG emission sources that would affect or would be affected by the project. Specifically, this report analyzes impacts within the SCAG region to capture the changes in traffic-related VMT that could occur as a direct result of the alignments as determined by the project traffic analysis (refer to Appendix 3.16-A, KNE Transportation Technical Report). The RSA applies to all alignments and stations, the design option, and the MSF.

FIGURE 3.9-1. RESOURCE STUDY AREA



Source: Connect Los Angeles Partners 2024

3.9.5 EXISTING SETTING

This existing setting discussion summarizes current conditions related to GHGs within and near the KNE RSA.

3.9.5.1 REGIONAL SETTING

GHGs include any gases that absorb infrared radiation in the atmosphere. GHGs trap heat in the atmosphere, keeping the earth's surface warmer than it otherwise would be. GHGs include, but are not limited to, water vapor, CO_2, CH_4, N_2O, hydrochlorofluorocarbons, ozone, HFCs, perfluorocarbons, and sulfur hexafluoride. GHGs contribute to the global warming trend, a regional and ultimately worldwide concern. What was once a natural phenomenon of climate has been changing because of human activities, resulting in an increase in CO_2. According to National Oceanic and Atmospheric Administration (NOAA) and National Aeronautics and Space Administration data, the earth's average surface (land and ocean) temperature has increased by an average of 0.14° Fahrenheit (0.08° Celsius) per decade since 1880, or about 2° Fahrenheit in total. 2022 was the sixth-warmest year on record based on NOAA's temperature data, and the 10 warmest years in the historical record have all occurred since 2010 (NOAA 2023). Most of the warming in recent decades is likely the result of human activities. Other aspects of the climate are also changing, such as rainfall patterns, snow and ice cover, and sea level.

Some GHGs, such as CO_2, occur naturally and are emitted to the atmosphere through both natural processes and human activities. Other GHGs (e.g., fluorinated gases) are created and emitted solely through human activities. GHGs differ in their ability to trap heat. For example, 1 ton of CO_2 emissions has a different effect than 1 ton of CH_4 emissions. To compare emissions of different GHGs, inventory compilers use a weighting factor called a global warming potential (GWP). To use a GWP, the heat-trapping ability of 1 metric ton (1,000 kilograms) of CO_2 is taken as the standard, and emissions are expressed in terms of CO_2 equivalents, but can also be expressed in terms of carbon equivalents. Therefore, the GWP of CO_2 is one, and the GWP of CH_4 is 25, whereas the GWP of N_2O is 298.

The principal GHGs that enter the atmosphere because of human activities are described below:

- **CO_2:** CO_2 enters the atmosphere via the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees, and wood products, and also as a result of other chemical reactions (e.g., manufacture of cement). CO_2 is also removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.
- **CH_4:** CH_4 is emitted during the production and transport of coal, natural gas, and oil. CH_4 emissions also result from livestock and other agricultural practices and from the decay of organic waste in municipal solid waste landfills.
- **N_2O:** N_2O is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.

- Fluorinated Gases: Fluorinated gases are synthetic, powerful GHGs that are emitted from a variety of household, commercial, and industrial applications and processes. Fluorinated gases (including HFCs, perfluorocarbons, and sulfur hexafluoride) are sometimes used as substitutes for ozone-depleting substances (e.g., chlorofluorocarbons, hydrochlorofluorocarbons, and halons). These gases are typically emitted in smaller quantities, but because they are potent GHGs, they are sometimes referred to as high-3 gases.

3.9.5.1.1 EMISSIONS INVENTORY

As a requirement of AB 32, CARB constructed a GHG emissions inventory to determine the 1990 emission level and 2020 emission limit, then later updated it using the Intergovernmental Panel on Climate Change (IPCC) fourth assessment report for GWPs (IPCC 2007). GHGs are inventoried on a statewide basis because their effects are not localized or regional; this is due to their rapid dispersion into the global atmosphere. Since climate change is a global and not a regional issue, specific inventories have not been prepared for the individual air basins. The original statewide 2020 limit of 427 million metric tons (MMT) CO_2e was approved on December 6, 2007, and was not sector-specific (CARB 2007). A revised statewide 2020 limit of 431 MMT CO_2e was approved on May 22, 2014, and was also not sector-specific (CARB 2014). Since development of the 1990 emissions inventory, CARB has prepared a statewide inventory for years 2000 through 2020. A summary of the 2020 statewide GHG emissions is included in Table 3.9-1.

TABLE 3.9-1. 2020 CALIFORNIA STATEWIDE GHG EMISSIONS INVENTORY

GHG EMISSIONS CATEGORY	2020 (MMT CO_2e)	PERCENTAGE OF TOTAL[1]
Transportation	135.8	37%
Electric Power	59.5	16%
Commercial and Residential	38.7	10%
Industrial	73.3	20%
Recycling and Waste	8.9	2%
High GWP[2]	21.3	6%
Agriculture	31.6	9%
Total California Emissions	***369.2***	**–**

Source: CARB 2022a
[1] Rounded to the nearest percentage. Category percentages do not sum to 100 percent due to rounding.
[2] High GWP refers to a set of refrigerants with high global warming potential.
GHG = greenhouse gases; GWP = global warming potential; MMT CO_2e = million metric tons of carbon dioxide equivalent

3.9.5.1.2 REGIONAL HIGHWAY TRAFFIC EMISSIONS

Emissions were estimated for 2019 regional traffic and for the 2045 without Project Conditions. Data on VMT in the region and emission factors from the EMFAC2021 model were used to estimate the GHG emissions. The emissions calculations were based on the total VMT in the region and the average speed on the roadway network. Table 3.9-2 summarizes the results of the GHG emissions from existing conditions.

TABLE 3.9-2. EXISTING AND 2045 WITHOUT PROJECT CONDITIONS ANNUAL REGIONAL ROADWAY TRAFFIC GHG EMISSIONS

EMISSION SOURCE	EMISSIONS (METRIC TONS PER YEAR)			
	CO_2	CH_4	N_2O	CO_2e[1]
2019 Existing Conditions Regional Traffic	69,457,283	58,843	967,800	70,483,927
2045 without Project Conditions Regional Traffic	60,307,723	16,270	783,883	61,107,876

Source: Connect Los Angeles Partners 2023
[1] CO_2e emissions are weighted by the GWP for each non-CO_2 pollutant (CO_2e equals emissions of non-CO_2 pollutant multiplied by its GWP).
CO_2 = carbon dioxide; CO_2e = carbon dioxide equivalent; CH_4 = methane; GHG = greenhouse gases; GWP = global warming potential; N_2O = nitrous oxide

3.9.6 PROJECT MEASURES

Project measures are design features, best management practices, or other commitments that Metro would implement as part of all proposed alignments and stations, the design option, and the MSF to reduce or avoid environmental effects associated with project construction and operation. Project measures are not the same as mitigation measures, which are used to reduce an environmental impact's significance level. Where applicable, project measures are also discussed in Section 3.9.7 as part of the evaluation of environmental impacts.

Construction and operation of the project would result in the release of criteria pollutants and GHG emissions. Appendix 3.3-A, KNE Air Quality Technical Report, describes project measures to limit release of these emissions and ensure all equipment operates at optimal manufacturer specifications. While project measures were not developed specifically for GHG emissions, the following air quality project measures are relevant to GHG emissions.

3.9.6.1 PM AQ-1: METRO GREEN CONSTRUCTION POLICY

Established by formal adoption of the Green Construction Policy in 2011, Metro commits to the following construction equipment requirements, construction best management practices (BMPs), and implementation strategies for all construction projects performed on Metro properties or rights-of-way (Metro 2011):

- Construction equipment shall incorporate, where feasible, emissions-reducing technology such as hybrid drives and specific fuel economy standards.

- Equipment shall be maintained according to manufacturer specifications.
- Idling of construction equipment and heavy-duty trucks shall be restricted to a maximum of five minutes when not in use (certain exceptions apply based on CARB exemptions).
- Traffic speeds shall be limited on all unpaved roads to 15 miles per hour or less.
- All off-road diesel-powered construction equipment greater than 50 horsepower shall meet Tier 4 off-road emission standards at a minimum.
- All on-road heavy-duty trucks with a gross vehicle weight rating greater than or equal to 14,000 pounds shall have engines meeting U.S. 2010 on-road emission standards.
- Where applicable and feasible, coordination shall occur with local jurisdictions to improve traffic flow by signal synchronization during construction activities.
- Electric power shall be used in lieu of diesel power where available.
- Generators: Every effort shall be made to use grid-based electric power at any construction site, where feasible. Where access to the power grid is not available, on-site generators must:
  - Meet a 0.01 gram per brake-horsepower-hour standard for particulate matter; or
  - Be equipped with Best Available Control Technology for particulate matter emissions reductions.
- Inspections: Metro shall conduct inspections of construction sites and affected off-road and on-road equipment and generators as well as compliance with air quality rules.
- Records: Prior to Notice to Proceed to commence construction and to be verified afterward consistent with project contract requirements and through enforcement provisions above, the Contractor shall submit to Metro the following information for all construction equipment to be used on Metro properties or rights-of-way:
  - A certified statement that all construction equipment used conforms to the requirements specified above;
  - A list of all the equipment and vehicles (i.e., off-road equipment, include the CARB-issued Equipment Identification Number) to be used; and
  - A copy of each Contractor's certified U.S. Environmental Protection Agency rating and applicable paperwork issued either by CARB, SCAQMD, and any other jurisdiction that has oversight over the equipment.

3.9.6.2 PM AQ-3: METRO 2020 MOVING BEYOND SUSTAINABILITY STRATEGIC PLAN

Construction and operation of the project will adhere to the commitments established by the MBSSP 2020 including, but not limited to, the application of renewable diesel requirements for contractors, the implementation of the Construction and Demolition Debris Policy, the identification of opportunities to decarbonize fuel sources at construction sites, the use of electric medium- and heavy-duty equipment during construction, and the design and build of capital projects to CalGreen Tier 2 standards (Metro 2020).

3.9.6.3 PM AQ-4: METRO DESIGN STANDARDS

The project will be designed in accordance with the Metro Rail Design Criteria and the Metro Systemwide Station Design Standards Policy, which includes the installation of high-efficiency LED lighting in all fixtures to reduce electricity consumption (Metro 2017, 2018b).

3.9.7 IMPACT EVALUATION AND MITIGATION MEASURES

This analysis presents the construction and operational impacts for GHG emissions, as well as any applicable mitigation measures associated with KNE. A summary of the impact conclusions and applicable mitigation measures is found in Table 3.9-18 in Section 3.9.7.1.

3.9.7.1 IMPACT GHG-1: EMISSION GENERATION

Impact GHG-1: Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

3.9.7.1.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.9.7.1.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction emissions associated with the KNE San Vicente–Fairfax Alignment would be generated from heavy-duty construction equipment exhaust, exhaust from worker vehicle travel to and from the project site, and exhaust from haul trucks, delivery trucks, and cement trucks importing and exporting material to the project site. GHG emissions from construction were estimated following the methodology described in Section 3.9.3.1.1.1.

As noted above, the KNE San Vicente–Fairfax Alignment would be constructed in three sections. Section 1 would extend from the Expo/Crenshaw Station to the Wilshire/Fairfax Station. Section 2 would extend from the Section 1 terminus at the Wilshire/Fairfax Station to the San Vicente/Santa Monica Station. Section 3 would extend from the Section 2 terminus at the San Vicente/Santa Monica Station to the northern terminus at either the Hollywood/Highland Station or the optional Hollywood Bowl Station. This analysis assumes that each of the three sections of the alignment would be built sequentially, not concurrently. As a result of uncertainty in the timing for construction of each section, 2041 was used as a representative "Year 1" for all sections when calculating GHG emissions. Due to the inherently cumulative nature of GHG emissions and their influence on climate, GHG emissions from all three construction sections were considered together when determining impacts.

Table 3.9-3 presents the construction GHG emissions by source for each section of the alignment. In addition, the MSF is an essential element in supporting the reliable operation of a light rail transit (LRT) system and would be necessary for the implementation and operation of the alignment. As such, GHG emissions associated with MSF construction are also presented in Table 3.9-3. Construction of the alignment and MSF would generate approximately 114,830 metric tons CO_2e.

TABLE 3.9-3. KNE SAN VICENTE–FAIRFAX ALIGNMENT CONSTRUCTION GHG EMISSIONS

EMISSION SOURCE	EMISSIONS ($MTCO_2e$)				
	SECTION 1	SECTION 2	SECTION 3	MSF	KNE SAN VICENTE–FAIRFAX ALIGNMENT TOTAL[1]
Off-Road Construction Equipment	25,014	19,034	21,370	4,657	70,076
Truck Trips (Hauling, Delivery, Cement)	12,091	8,712	13,216	1,242	35,261
Worker Commute Trips	3,313	2,542	2,987	651	9,493
Total Emissions	**40,418**	**30,288**	**37,573**	**6,550**	**114,830**
Amortized Construction (30 Years)[2]	1,347	1,010	1,252	218	3,828

Source: Connect Los Angeles Partners 2023
[1] The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignment. As such, GHG emissions associated with MSF construction have been included in the alignment total.
[2] Amortized Construction = Total Emissions divided by 30 years.
Note: The KNE San Vicente–Fairfax Alignment would be constructed in three sections, referred to as Section 1, Section 2, and Section 3.
GHG = greenhouse gases; MSF = maintenance and storage facility; $MTCO_2e$ = metric tons carbon dioxide equivalent

SCAQMD guidance for CEQA assessments states that construction-related GHG emissions that occur over a relatively short-term period should be amortized over a 30-year period and considered with operational emissions due to the inherently cumulative nature of GHG emissions and the persistence of GHGs in the atmosphere (SCAQMD 2008). The amortized GHG emissions rate during construction of the alignment and MSF would be approximately 3,828 $MTCO_2e$ annually. Amortized GHG construction emissions are considered in conjunction with operational GHG emissions from the alignment and MSF in Table 3.9-4.

All construction activities would be conducted in accordance with project measures PM AQ-1 and PM AQ-3 to avoid and minimize emissions by following equipment and fuel requirements. GHG emissions would be temporarily generated to construct an energy-efficient mass transit system that would reduce long-term regional GHG emissions as compared to 2045 without Project Conditions. Metro recognizes transportation mode shift to transit as the primary contributor to GHG-emissions displacement, and direct emissions generated through construction activities would be more than offset by the future benefits of transportation mode shift that would occur with operation of the alignment (see Table 3.9-4). Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

TABLE 3.9-4. KNE SAN VICENTE–FAIRFAX ALIGNMENT OPERATIONAL GHG EMISSIONS

EMISSION SOURCE	EMISSIONS ($MTCO_2e$ PER YEAR)
Amortized Construction[1]	3,828
Regional Traffic	61,093,765
Light Rail Operations	784
Station Operation	120
MSF Operation	91
Total Emissions[2,3]	**61,098,588**
Emissions without Project	61,107,876
Change in Emissions due to Project	-9,288

Source: Connect Los Angeles Partners 2023
[1] Amortized Construction = Total Emissions divided by 30 years.
[2] The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignment. As such, GHG emissions associated with MSF operation have been included in the alignment total.
[3] Total Emissions in 2045 were calculated using 2019 carbon intensity factors. Actual emissions in 2045 from electricity generation are expected to approach zero, assuming a zero-carbon energy portfolio is achieved by 2045.
GHG = greenhouse gases; MSF = maintenance and storage facility; $MTCO_2e$ = metric tons carbon dioxide equivalent

3.9.7.1.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operational emissions associated with the KNE San Vicente–Fairfax Alignment would include direct and indirect emissions after construction is completed and project operation has begun. Direct operational GHG emissions from regional roadway traffic were estimated using projected VMT in the SCAG region for each alignment, which reflects the increased transit use anticipated as a result of the project. Indirect operational GHG emissions would occur from the generation of electricity used to operate the LRVs, the lighting, and other functions of the stations. The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignment. As such, direct emissions (natural gas use, water and wastewater use, and solid waste disposal) and indirect emissions (electricity generation) from operation of the MSF additions were included in the analysis. Total annual operational emissions from the alignment, including the LRVs, stations, and MSF, are summarized in Table 3.9-4.

The alignment would reduce roadway traffic VMT and the associated GHG emissions as compared to 2045 without Project Conditions; however, operation of the LRVs, stations, and MSF would increase demand for electricity. Overall, a net decrease in regional operational GHG emissions would be expected as compared to 2045 without Project Conditions. After accounting for amortized construction emissions, operation of the alignment would result in an estimated net GHG emissions reduction of 9,288 $MTCO_2e$ annually in 2045. GHG emissions presented for electricity use from LRV,

station, and MSF operation are expected to approach zero by 2045 because California's Renewables Portfolio Standard requires all of the state's electricity to come from renewable sources by 2045.

In addition to emissions decreases on the project level, KNE is a component of the RTP and would contribute to California's goal to increase mass transit under the AB 32 Scoping Plan. Implementation of the alignment would enhance regional transportation systems and contribute to planning efforts to reduce VMT and GHG emissions from transportation sources. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.9.7.1.2 KNE FAIRFAX ALIGNMENT

3.9.7.1.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction emissions associated with the KNE Fairfax Alignment would be generated from heavy-duty construction equipment exhaust, exhaust from worker vehicle travel to and from the project site, and exhaust from haul trucks, delivery trucks, and cement trucks importing and exporting material to the project site. GHG emissions from construction were estimated following the methodology described in Section 3.9.3.1.1.1.

As noted above, the KNE Fairfax Alignment would be constructed in two sections. Section 1 would extend from the Expo/Crenshaw Station to the Wilshire/Fairfax Station. Section 2 would extend from the Section 1 terminus at the Wilshire/Fairfax Station to the northern terminus at either the Hollywood/Highland Station or the optional Hollywood Bowl Station. This analysis assumes that the two sections of the KNE Fairfax Alignment would be built sequentially, not concurrently. As a result of uncertainty in the timing for construction of each section, 2041 was used as a representative "Year 1" for all sections when calculating GHG emissions. Due to the inherently cumulative nature of GHG emissions and their influence on climate, GHG emissions from both construction sections were considered together when determining impacts.

Table 3.9-5 presents the construction GHG emissions by source for each section of the alignment and the MSF. In addition, the MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignment. As such, GHG emissions associated with MSF construction are also presented in Table 3.9-5. Construction of the alignment and MSF would generate approximately 92,079 $MTCO_2e$.

TABLE 3.9-5. KNE FAIRFAX ALIGNMENT CONSTRUCTION GHG EMISSIONS

EMISSION SOURCE	EMISSIONS ($MTCO_2e$)			
	SECTION 1	SECTION 2	MSF	KNE FAIRFAX ALIGNMENT TOTAL[1]
Off-Road Construction Equipment	25,014	25,480	4,657	55,152
Truck Trips (Hauling, Delivery, Cement)	12,091	16,017	1,266	29,375
Worker Commute Trips	3,313	3,596	643	7,552
Total Emissions	**40,418**	**45,093**	**6,567**	**92,079**
Amortized Construction (30 Years)[2]	1,347	1,503	219	3,069

Source: Connect Los Angeles Partners 2023
[1] The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignment. As such, GHG emissions associated with MSF construction have been included in the alignment total.
[2] Amortized Construction = Total Emissions divided by 30 years.
Note: The KNE Fairfax Alignment would be constructed in two sections, referred to as Section 1 and Section 2.
GHG = greenhouse gases; MSF = maintenance and storage facility; $MTCO_2e$ = metric tons carbon dioxide equivalent

SCAQMD guidance for CEQA assessments states that construction-related GHG emissions that occur over a relatively short-term period should be amortized over a 30-year period and considered with operational emissions due to the inherently cumulative nature of GHG emissions and the persistence of GHGs in the atmosphere (SCAQMD 2008). Amortized GHG construction emissions are considered in conjunction with operational GHG emissions from the alignment and MSF in Table 3.9-6. As shown, direct emissions generated through construction activities would be more than offset by the future benefits of transportation mode shift that would occur with operation of the alignment.

TABLE 3.9-6. KNE FAIRFAX ALIGNMENT OPERATIONAL GHG EMISSIONS

EMISSION SOURCE	EMISSIONS ($MTCO_2e$ PER YEAR)[2]
Amortized Construction[1]	3,069
Regional Traffic	61,094,601
Light Rail Operations	630
Station Operation	94
MSF Operation	91
Total Emissions[2,3]	**61,098,485**
Emissions without Project	61,107,876
Change in Emissions due to Project	-9,391

Source: Connect Los Angeles Partners 2023
[1] Amortized Construction = Total Emissions divided by 30 years.
[2] The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignment. As such, GHG emissions associated with MSF operation have been included in the alignment total.
[3] Total Emissions in 2045 were calculated using 2019 carbon intensity factors. Actual emissions in 2045 from electricity generation are expected to approach zero, assuming a zero-carbon energy portfolio is achieved by 2045.
GHG = greenhouse gases; MSF = maintenance and storage facility; $MTCO_2e$ = metric tons carbon dioxide equivalent

All construction activities would be conducted in accordance with project measures PM AQ-1 and PM AQ-3 to avoid and minimize emissions by following equipment and fuel requirements. GHG emissions would be temporarily generated to construct an energy-efficient mass transit system that would reduce long-term regional GHG emissions as compared to 2045 without Project Conditions. Metro recognizes transportation mode shift to transit as the primary contributor to GHG-emissions displacement, and direct emissions generated through construction activities would be more than offset by the future benefits of transportation mode shift that would occur with operation of the KNE Fairfax Alignment. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.9.7.1.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operational emissions associated with the KNE Fairfax Alignment would include direct and indirect emissions after construction is completed and project operation has begun. Direct operational GHG emissions from regional roadway traffic were estimated using projected VMT in the SCAG region for each alignment, which reflects the increased transit use anticipated as a result of the project. Indirect operational GHG emissions would occur from the generation of electricity used to operate the LRVs, the lighting, and other functions of the stations. The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignment. As such, direct emissions (natural gas use, water and wastewater use, and solid waste disposal) and indirect emissions (electricity generation) from operation of the MSF additions were included in the analysis. Total annual operational emissions from the alignment, including the LRVs, stations, and MSF, are summarized in Table 3.9-6.

The alignment would reduce roadway traffic VMT and the associated GHG emissions as compared to 2045 without Project Conditions; however, operation of the LRVs, stations, and MSF would increase demand for electricity. Overall, a net decrease in regional operational GHG emissions would be expected as compared to 2045 without Project Conditions. After accounting for amortized construction emissions, operation of the alignment would result in an estimated net GHG emissions reduction of 9,391 $MTCO_2e$ annually in 2045. GHG emissions presented for electricity use from LRV, station, and MSF operation are expected to approach zero by 2045 because California's Renewables Portfolio Standard requires all of the state's electricity to come from renewable sources by 2045. As shown in Table 3.9-6 above, operation of the alignment would result in an estimated net GHG emissions reduction of 9,391 $MTCO_2e$ annually in 2045.

In addition to emissions decreases on the project level, KNE is a component of the RTP and would contribute to California's goal to increase mass transit under the AB 32 Scoping Plan. Implementation of the alignment would enhance regional transportation systems and contribute to planning efforts to reduce VMT and GHG emissions from transportation sources. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.9.7.1.3 KNE LA BREA ALIGNMENT

3.9.7.1.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction emissions associated with the KNE La Brea Alignment would be generated from heavy-duty construction equipment exhaust, exhaust from worker vehicle travel to and from the project site, and exhaust from haul trucks, delivery trucks, and cement trucks importing and exporting material to the project site. GHG emissions from construction were estimated following the methodology described in Section 3.9.3.1.1.1.

As noted above, the KNE La Brea Alignment would be constructed in two sections. Section 1 would extend from the Expo/Crenshaw Station to the Wilshire/La Brea Station. Section 2 would extend from the Section 1 terminus at the Wilshire/La Brea Station to the northern terminus at either the Hollywood/Highland Station or the optional Hollywood Bowl Station. This analysis assumes that the two sections of the KNE La Brea Alignment would be built sequentially, not concurrently. As a result of uncertainty in the timing for construction of each section, 2041 was used as a representative "Year 1" for all sections when calculating GHG emissions. Due to the inherently cumulative nature of GHG emissions and their influence on climate, GHG emissions from both construction sections were considered together when determining impacts.

Table 3.9-7 presents the construction GHG emissions by source for each section of the alignment and the MSF. In addition, the MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignment. As such, GHG emissions associated with MSF construction are also presented in Table 3.9-7. Construction of the alignment and MSF would generate approximately 79,909 $MTCO_2e$.

TABLE 3.9-7. KNE LA BREA ALIGNMENT CONSTRUCTION GHG EMISSIONS

	EMISSIONS ($MTCO_2e$)			
EMISSION SOURCE	SECTION 1	SECTION 2	MSF	KNE LA BREA ALIGNMENT TOTAL[1]
Off-Road Construction Equipment	23,409	20,459	4,607	48,474
Truck Trips (Hauling, Delivery, Cement)	10,752	12,898	1,262	24,912
Worker Commute Trips	3,135	2,780	608	6,522
Total Emissions	**37,295**	**36,137**	**6,477**	**79,909**
Amortized Construction (30 Years)[2]	1,243	1,205	216	2,664

Source: Connect Los Angeles Partners 2023
[1] The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignment. As such, GHG emissions associated with MSF construction have been included in the alignment total.
[2] Amortized Construction = Total Emissions divided by 30 years.
Note: The KNE La Brea Alignment would be constructed in two sections, referred to as Section 1 and Section 2.
GHG = greenhouse gases; MSF = maintenance and storage facility; $MTCO_2e$ = metric tons carbon dioxide equivalent

SCAQMD guidance for CEQA assessments states that construction-related GHG emissions that occur over a relatively short-term period should be amortized over a 30-year period and considered with operational emissions due to the inherently cumulative nature of GHG emissions and the persistence of GHGs in the atmosphere (SCAQMD 2008). Amortized GHG construction emissions are considered in conjunction with operational GHG emissions from the alignment and MSF in Table 3.9-8. As shown, direct emissions generated through construction activities would be more than offset by the future benefits of transportation mode shift that would occur with operation of the alignment.

All construction activities would be conducted in accordance with project measures PM AQ-1 and PM AQ-3 to avoid and minimize emissions by following equipment and fuel requirements. GHG emissions would be temporarily generated to construct an energy-efficient mass transit system that would reduce long-term regional GHG emissions as compared to 2045 without Project Conditions. Metro recognizes transportation mode shift to transit as the primary contributor to GHG-emissions displacement, and direct emissions generated through construction activities would be more than offset by the future benefits of transportation mode shift that would occur with operation of the KNE La Brea Alignment. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

TABLE 3.9-8. KNE LA BREA ALIGNMENT OPERATIONAL GHG EMISSIONS

EMISSION SOURCE	EMISSIONS ($MTCO_2e$ PER YEAR)
Amortized Construction[1]	2,664
Regional Traffic	61,093,763
Light Rail Operations	501
Station Operation	80
MSF Operation	91
Total Emissions[2, 3]	**61,097,099**
Emissions without Project	61,107,876
Change in Emissions due to Project	-10,777

Source: Connect Los Angeles Partners 2023
[1] Amortized Construction = Total Emissions divided by 30 years.
[2] The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignment. As such, GHG emissions associated with MSF operation have been included in the alignment total.
[3] Total Emissions in 2045 were calculated using 2019 carbon intensity factors. Actual emissions in 2045 from electricity generation are expected to approach zero, assuming a zero-carbon energy portfolio is achieved by 2045.
GHG = greenhouse gases; MSF = maintenance and storage facility; $MTCO_2e$ = metric tons carbon dioxide equivalent

3.9.7.1.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operational emissions associated with the KNE La Brea Alignment would include direct and indirect emissions after construction is completed and project operation has begun. Direct operational GHG emissions from regional roadway traffic were estimated using projected VMT in the SCAG region for each alignment, which reflects the increased transit use anticipated as a result of the project. Indirect operational GHG emissions would occur from the generation of electricity used to operate the LRVs, the lighting, and other functions of the stations. The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignment. As such, direct emissions (natural gas use, water and wastewater use, and solid waste disposal) and indirect emissions (electricity generation) from operation of the MSF additions were included in the analysis. Total annual operational emissions from the alignment, including the LRVs, stations, and MSF, are summarized in Table 3.9-8.

The alignment would reduce roadway traffic VMT and the associated GHG emissions as compared to 2045 without Project Conditions; however, operation of the LRVs, stations, and MSF would increase demand for electricity. Overall, a net decrease in regional operational GHG emissions would be expected as compared to 2045 without Project Conditions. After accounting for amortized construction emissions, operation of the alignment would result in an estimated net GHG emissions reduction of 10,777 $MTCO_2e$ annually in 2045. GHG emissions presented for electricity use from LRV, station, and MSF operation are expected to approach zero by 2045 because California's Renewables Portfolio Standard requires all of the state's electricity to come from renewable sources by 2045. As shown in Table 3.9-8, operation of the alignment would result in an estimated net GHG emissions reduction of 10,777 $MTCO_2e$ annually in 2045.

In addition to emissions decreases on the project level, KNE is a component of the RTP and would contribute to California's goal to increase mass transit under the AB 32 Scoping Plan. Implementation of the alignment would enhance regional transportation systems and contribute to planning efforts to reduce VMT and GHG emissions from transportation sources. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.9.7.1.4 HOLLYWOOD BOWL DESIGN OPTION

3.9.7.1.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The Hollywood Bowl Design Option changes the proposed Hollywood/Highland Station from a terminus station to an in-line station and adds a new Hollywood Bowl terminus station to the final section of each alignment. In order to capture these changes, GHG emissions were recalculated for the final section of each alignment to include concurrent construction of the Hollywood Bowl Design Option. Construction of earlier sections would not be affected by the addition of the Hollywood Bowl Design Option to the final section construction. As previously described, this analysis assumes that the sections of each alignment would be built sequentially, not concurrently. As a result of uncertainty in the timing for construction of each section, 2041 was used as a representative "Year 1" for all sections when calculating GHG emissions. Due to the inherently

cumulative nature of GHG emissions and their influence on climate, GHG emissions from all construction sections, including Hollywood Bowl Design Option construction concurrent with the final section of each alignment, were considered together when determining impacts for each alignment with the Hollywood Bowl Design Option.

Construction emissions associated with the Hollywood Bowl Design Option would be generated from heavy-duty construction equipment exhaust, exhaust from worker vehicle travel to and from the project site, and exhaust from haul trucks, delivery trucks, and cement trucks importing and exporting material to the project site.

Table 3.9-9, Table 3.9-10, and Table 3.9-11 present the construction GHG emissions by source for each section of the KNE San Vicente–Fairfax Alignment, KNE Fairfax Alignment, and KNE La Brea Alignment, respectively, including Hollywood Bowl Design Option construction concurrent with the final section of each, and the MSF. As shown in the tables, construction of the KNE San Vicente–Fairfax Alignment with the Hollywood Bowl Design Option and MSF would generate approximately 136,778 $MTCO_2e$; construction of the KNE Fairfax Alignment with the Hollywood Bowl Design Option and MSF would generate approximately 113,631 $MTCO_2e$; and construction of KNE La Brea Alignment with the Hollywood Bowl Design Option and MSF would generate approximately 102,165 $MTCO_2e$.

TABLE 3.9-9. KNE SAN VICENTE–FAIRFAX ALIGNMENT WITH HOLLYWOOD BOWL DESIGN OPTION CONSTRUCTION GHG EMISSIONS

	EMISSIONS ($MTCO_2e$)				
EMISSION SOURCE	SECTION 1	SECTION 2	SECTION 3 WITH HOLLYWOOD BOWL DESIGN OPTION	MSF	KNE SAN VICENTE–FAIRFAX ALIGNMENT WITH DESIGN OPTION TOTAL[1]
Off-Road Construction Equipment	25,014	19,034	41,428	4,657	90,133
Truck Trips (Hauling, Delivery, Cement)	12,091	8,712	13,375	1,242	35,420
Worker Commute Trips	3,313	2,542	4,718	651	11,225
Total Emissions	**40,418**	**30,288**	**59,521**	**6,550**	**136,778**
Amortized Construction (30 Years)[2]	1,347	1,010	1,984	218	4,559

Source: Connect Los Angeles Partners 2023
[1] The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignment with the Hollywood Bowl Design Option. As such, GHG emissions associated with MSF construction have been included in the alignment total.
[2] Amortized Construction = Total Emissions divided by 30 years.
Note: The KNE San Vicente–Fairfax Alignment would be constructed in three sections, referred to as Section 1, Section 2, and Section 3 (Section 3 would include the Hollywood Bowl Design Option under the KNE San Vicente–Fairfax Alignment).
GHG = greenhouse gases; MSF = maintenance and storage facility; $MTCO_2e$ = metric tons carbon dioxide equivalent

TABLE 3.9-10. KNE FAIRFAX ALIGNMENT WITH HOLLYWOOD BOWL DESIGN OPTION CONSTRUCTION GHG EMISSIONS

EMISSION SOURCE	EMISSIONS ($MTCO_2e$) SECTION 1	SECTION 2 WITH HOLLYWOOD BOWL DESIGN OPTION	MSF	KNE FAIRFAX ALIGNMENT WITH DESIGN OPTION TOTAL[1]
Off-Road Construction Equipment	25,014	45,186	4,657	74,858
Truck Trips (Hauling, Delivery, Cement)	12,091	16,177	1,253	29,522
Worker Commute Trips	3,313	5,307	631	9,251
Total Emissions	**40,418**	**66,671**	**6,541**	**113,631**
Amortized Construction (30 Years)[2]	1,347	2,222	218	3,788

Source: Connect Los Angeles Partners 2023
[1] The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignment with the Hollywood Bowl Design Option. As such, GHG emissions associated with MSF construction have been included in the alignment total.
[2] Amortized Construction = Total Emissions divided by 30 years.
Note: The KNE Fairfax Alignment would be constructed in two sections, referred to as Section 1 and Section 2 (Section 2 would include the Hollywood Bowl Design Option under the KNE Fairfax and La Brea Alignments).
GHG = greenhouse gases; MSF = maintenance and storage facility; $MTCO_2e$ = metric tons carbon dioxide equivalent

TABLE 3.9-11. KNE LA BREA ALIGNMENT WITH HOLLYWOOD BOWL DESIGN OPTION CONSTRUCTION GHG EMISSIONS

EMISSION SOURCE	EMISSIONS ($MTCO_2e$) SECTION 1	SECTION 2 WITH HOLLYWOOD BOWL DESIGN OPTION	MSF	KNE LA BREA ALIGNMENT WITH DESIGN OPTION TOTAL[1]
Off-Road Construction Equipment	23,409	40,668	4,607	68,683
Truck Trips (Hauling, Delivery, Cement)	10,752	13,069	1,249	25,069
Worker Commute Trips	3,135	4,649	629	8,412
Total Emissions	**37,295**	**58,386**	**6,485**	**102,165**
Amortized Construction (30 Years) [2]	1,243	1,946	216	3,406

Source: Connect Los Angeles Partners 2023
[1] The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignment with the Hollywood Bowl Design Option. As such, GHG emissions associated with MSF construction have been included in the alignment total.
[2] Amortized Construction = Total Emissions divided by 30 years.
Note: The KNE La Brea Alignment would be constructed in two sections, referred to as Section 1 and Section 2 (Section 2 would include the Hollywood Bowl Design Option under the KNE Fairfax and La Brea Alignments).
GHG = greenhouse gases; MSF = maintenance and storage facility; $MTCO_2e$ = metric tons carbon dioxide equivalent

SCAQMD guidance for CEQA assessments states that construction-related GHG emissions that occur over a relatively short-term period should be amortized over a 30-year period and considered with operational emissions due to the inherently cumulative nature of GHG emissions and the persistence of GHGs in the atmosphere (SCAQMD 2008). Amortized GHG construction emissions are considered in conjunction with operational GHG emissions from the alignments, Hollywood Bowl Design Option, and MSF in Table 3.9-12. As shown, direct emissions generated through construction activities would be more than offset by the future benefits of transportation mode shift that would occur with operation of the Hollywood Bowl Design Option in conjunction with any alignment.

All construction activities would be conducted in accordance with project measures PM AQ-1 and PM AQ-3 to avoid and minimize emissions by following equipment and fuel requirements. GHG emissions would be temporarily generated to construct an energy-efficient mass transit system that would reduce long-term regional GHG emissions as compared to 2045 without Project Conditions. Metro recognizes transportation mode shift to transit as the primary contributor to GHG-emissions displacement, and direct emissions generated through construction activities would be more than offset by the future benefits of transportation mode shift that would occur with operation of the alignments with the Hollywood Bowl Design Option. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

TABLE 3.9-12. KNE ALIGNMENTS WITH HOLLYWOOD BOWL DESIGN OPTION OPERATIONAL GHG EMISSIONS

EMISSION SOURCE	EMISSIONS ($MTCO_2e$ PER YEAR)		
	KNE SAN VICENTE–FAIRFAX ALIGNMENT WITH DESIGN OPTION	KNE FAIRFAX ALIGNMENT WITH DESIGN OPTION	KNE LA BREA ALIGNMENT WITH DESIGN OPTION
Amortized Construction[1]	4,559	3,788	3,406
Regional Traffic	61,093,765	61,094,601	61,093,763
Light Rail Operations	865	711	582
Station Operation	134	107	94
MSF Operation	91	91	91
Total Emissions[2,3]	**61,099,414**	**61,099,298**	**61,097,935**
Emissions without Project	61,107,876	61,107,876	61,107,876
Change in Emissions due to Project	-8,463	-8,578	-9,941

Source: Connect Los Angeles Partners 2023
[1] Amortized Construction = Total Emissions divided by 30 years.
[2] The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of any alignment. As such, GHG emissions associated with MSF operation have been included in the alignment totals.
[3] Total emissions in 2045 were calculated using 2019 carbon intensity factors. Actual emissions in 2045 from electricity generation are expected to approach zero, assuming a zero-carbon energy portfolio is achieved by 2045.
GHG = greenhouse gases; MSF = maintenance and storage facility; $MTCO_2e$ = metric tons carbon dioxide equivalent

3.9.7.1.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. As demonstrated above, operation of all evaluated alignments would result in a decrease in GHG emissions at the project level. The Hollywood Bowl Design Option would slightly alter the configuration of the light rail alignment and add one underground station. The Metro Corridor Based Model 2018c forecasts that the Hollywood Bowl Design Option would not appreciably increase or decrease ridership of the light rail system, nor would it be expected to appreciably increase or decrease VMT in the SCAG region relative to the alignments; therefore, there was no change to regional traffic emissions estimates as a result of operation of the Hollywood Bowl Design Option. As shown in Table 3.9-12, operation of the Hollywood Bowl Design Option in conjunction with any alignment would result in an estimated net reduction of GHG emissions annually in 2045. GHG emissions presented for electricity use from LRV, station, and MSF operation are expected to approach zero by 2045 because California's Renewables Portfolio Standard requires all of the state's electricity to come from renewable sources by 2045.

In addition to emissions decreases on the project level, KNE is a component of the RTP and would contribute to California's goal to increase mass transit under the AB 32 Scoping Plan. Implementation of any alignment with the Hollywood Bowl Design Option would enhance regional transportation systems and contribute to planning efforts to reduce VMT and GHG emissions from transportation sources. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.9.7.1.5 MAINTENANCE AND STORAGE FACILITY

3.9.7.1.5.1 CONSTRUCTION IMPACTS

Less Than Significant Impact. Construction emissions associated with the MSF would be generated from heavy-duty construction equipment exhaust, exhaust from worker vehicle travel to and from the project site, and exhaust from haul trucks and delivery trucks importing and exporting material to the project site. GHG emissions from construction were estimated following the methodology described in Section 3.9.3.1.1.1.

Project activities associated with the MSF would occur in two parts, concurrent with Section 1 and Section 2 of each alignment. Concurrently with Section 1 of the alignments, MSF facility construction would include the addition of four storage tracks to the existing Division 16 site to accommodate increased LRV storage. Concurrently with Section 2 of the alignments, MSF facilities constructed would include expansion of the existing Division 16 MSF on the adjacent 16.5-acre site and comprise approximately 57,380 square feet of facility structures. No MSF construction would occur concurrently with Section 3 of the KNE San Vicente–Fairfax Alignment.

As a result of uncertainty in the timing for construction of each section, 2041 was used as a representative "Year 1" for all sections when calculating GHG emissions. The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignments. As such, GHG emissions associated with MSF construction have been presented with GHG emissions from construction of each alignment.

Table 3.9-13 presents the construction GHG emissions by source for each alignment with the MSF. As shown in the table, construction of the MSF with the KNE San Vicente–Fairfax Alignment would generate approximately 114,830 $MTCO_2e$; construction of the MSF with the KNE Fairfax Alignment would generate approximately 92,079 $MTCO_2e$; and construction of the MSF with the KNE La Brea Alignment would generate approximately 79,909 $MTCO_2e$.

SCAQMD guidance for CEQA assessments states that construction-related GHG emissions that occur over a relatively short-term period should be amortized over a 30-year period and considered with operational emissions due to the inherently cumulative nature of GHG emissions and the persistence of GHGs in the atmosphere (SCAQMD 2008). The amortized GHG emissions rate during construction would be approximately 3,828 $MTCO_2e$ annually for the MSF with the KNE San Vicente–Fairfax Alignment, approximately 3,069 $MTCO_2e$ annually for the MSF with the KNE Fairfax Alignment, and approximately 2,664 $MTCO_2e$ annually for the MSF with the KNE La Brea Alignment.

All construction activities would be conducted in accordance with project measures PM AQ-1 and PM AQ-3 to avoid and minimize emissions by following equipment and fuel requirements. GHG emissions would be temporarily generated to construct an energy-efficient mass transit system that would reduce long-term regional GHG emissions as compared to 2045 without Project Conditions. Metro recognizes transportation mode shift to transit as the primary contributor to GHG emissions displacement, and direct emissions generated through construction activities would be more than offset by the future benefits of transportation mode shift that would occur with implementation of any of the proposed alignments and the MSF, which provides services essential to operation of the project. Therefore, the MSF would have a less than significant impact during construction.

TABLE 3.9-13. MSF AND ALIGNMENT CONSTRUCTION GHG EMISSIONS

EMISSION SOURCE	EMISSIONS ($MTCO_2e$)								
	KNE SAN VICENTE–FAIRFAX ALIGNMENT			KNE FAIRFAX ALIGNMENT			KNE LA BREA ALIGNMENT		
	SECTION 1 MSF FACILITIES[1]	SECTION 2 MSF EXPANSION[2]	ALIGNMENT WITH MSF[3]	SECTION 1 MSF FACILITIES[1]	SECTION 2 MSF EXPANSION[2]	ALIGNMENT WITH MSF[3]	SECTION 1 MSF FACILITIES[1]	SECTION 2 MSF EXPANSION[2]	ALIGNMENT WITH MSF[3]
Off-Road Construction Equipment	542	4,115	70,076	542	4,115	55,152	492	4,115	48,474
Truck Trips (Hauling, Delivery, Cement)	128	1,114	35,261	128	1,138	29,375	124	1,138	24,912
Worker Commute Trips	120	530	9,493	120	523	7,552	96	512	6,522
Total Emissions	**791**	**5,759**	**114,830**	**791**	**5,776**	**92,079**	**712**	**5,765**	**79,909**
Amortized Construction (30 Years) [4]	26	192	3,828	26	193	3,069	24	192	2,664

Source: Connect Los Angeles Partners 2023
[1] Section 1 MSF Facilities = the additional four storage tracks required to support operation of Section 1 of the alignment
[2] Section 2 MSF Expansion = full expansion of the Division 16 site
[3] The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of any alignment. As such, GHG emissions associated with MSF construction have been presented with alignment emissions totals.
[4] Amortized Construction = Total Emissions divided by 30 years.
GHG = greenhouse gases; MSF = maintenance and storage facility; $MTCO_2e$ = metric tons carbon dioxide equivalent

3.9.7.1.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the MSF would result in emissions from electricity use, natural gas use, water and wastewater use, solid waste disposal, and vehicle trips to and from the site. It was assumed that emissions from additional activity associated with the four storage tracks to accommodate Section 1 of the alignments at the existing Division 16 MSF would be minimal since that facility is already in operation. Therefore, emissions specific to the additional four storage tracks for Section 1 are estimated to be similar to existing conditions and are not included as a separate line item in Table 3.9-14.

TABLE 3.9-14. MAINTENANCE AND STORAGE FACILITY OPERATIONAL GHG EMISSIONS

EMISSION SOURCE	EMISSIONS ($MTCO_2e$ PER YEAR)		
	KNE SAN VICENTE–FAIRFAX ALIGNMENT WITH MSF	KNE FAIRFAX ALIGNMENT WITH MSF	KNE LA BREA ALIGNMENT WITH MSF
Amortized Construction[1]	3,828	3,069	2,664
Regional Traffic[2]	61,093,765	61,094,601	61,093,763
Light Rail Operations	784	630	501
Station Operation	120	94	80
MSF Operation	91	91	91
Total Emissions[3,4]	**61,098,588**	**61,098,485**	**61,097,099**
Emissions without Project	61,107,876	61,107,876	61,107,876
Change in Emissions due to Project	-9,288	-9,391	-10,777

Source: Connect Los Angeles Partners 2023
[1] Amortized Construction = Total emissions divided by 30 years.
[2] Regional Traffic emissions include worker commute trips to the MSF as part of regional background growth.
[3] The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of any alignment. As such, GHG emissions associated with MSF construction have been presented with alignment emissions totals.
[4] Total emissions in 2045 were calculated using 2019 carbon intensity factors. Actual emissions in 2045 from electricity generation are expected to approach zero, assuming a zero-carbon energy portfolio is achieved by 2045.
GHG = greenhouse gases; MSF = maintenance and storage facility; $MTCO_2e$ = metric tons carbon dioxide equivalent

The MSF is considered a component of all of the alignments. Operation of the MSF expansion at Metro's Division 16 would generate approximately 91 $MTCO_2e$ per year. As shown below, when the additional MSF emissions are added, all alignments result in a decrease in total annual emissions as compared to 2045 without Project Conditions. Therefore, the MSF would have a less than significant impact during operation.

3.9.7.2 IMPACT GHG-2: CONFLICTS WITH GHG-REDUCING PLANS, POLICIES, AND REGULATIONS

Impact GHG-2: Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

At the state level, the primary transportation-related plans and regulations that address GHG emissions include SB 375, AB 32, the 2022 AB 32 Scoping Plan (CARB 2022b), and the 2021 CalSTA CAPTI (CalSTA

2021). The primary regional GHG emissions reduction plan is contained within the SCS portion of the SCAG Connect SoCal 2020 RTP/SCS (SCAG 2020). The project was identified as a Strategic Project in the 2020 RTP/SCS, and was incorporated into its regional growth projections and transportation strategies. Metro will prioritize and ensure consistency with its own 2019 CAAP (Metro 2019), 2020 MBSSP, and Green Construction Policy for all projects being implemented. At the local level, applicable climate action plans include the CCAP of the Los Angeles County 2035 General Plan, the City of Los Angeles' Sustainable City pLAn (2015) and Green New Deal (2019), and the City of West Hollywood's WeHo Climate Action Plan (2021).

Decreasing GHG emissions through the reduction of fossil fuel use in transportation, and specifically by lowering passenger vehicle VMT, is a universal focus of the 2022 AB 32 Scoping Plan, 2020 RTP/SCS, 2021 CalSTA CAPTI, Metro 2019 CAAP, Los Angeles County CCAP, City of Los Angeles Sustainable City pLAn and Green New Deal, and City of West Hollywood WeHo Climate Action Plan. The 2017 AB 32 Scoping Plan identified three key means of reducing these emissions: increasing vehicle efficiency; reducing fuel carbon content; and reducing VMT (CARB 2017). CARB has specifically identified VMT reduction as a key measure in ensuring the SB 375 targets are achieved, acknowledging that state emission targets would be unachievable without limiting statewide VMT growth. The 2022 AB 32 Scoping Plan builds on these concepts by focusing on making active transportation and clean transit options cheaper and more convenient than driving. The Los Angeles County, City of Los Angeles, and City of West Hollywood climate action plans all include initiatives to promote reduced vehicle travel through expansion of sustainable forms of transportation and improvements to the efficiency, safety, and convenience of transit services.

3.9.7.2.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.9.7.2.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE San Vicente–Fairfax Alignment would temporarily generate GHG emissions. In accordance with Metro policies adopted to reduce GHG emissions during construction of Metro projects, project measures PM AQ-1 and PM AQ-3 would be implemented throughout construction to avoid and minimize GHG emissions by following equipment and fuel requirements. GHG emissions would be temporarily generated to construct an energy-efficient mass transit system that would reduce long-term regional GHG emissions, directly contributing to statewide and regional efforts to reduce fossil fuel use in transportation, decrease passenger vehicle VMT, and improve the convenience of clean transit. Construction of the alignment would not conflict with GHG-reduction plans, policies, or regulations. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.9.7.2.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE San Vicente–Fairfax Alignment would directly contribute to statewide, regional, and local efforts to reduce GHG emissions by reducing fossil fuel use in transportation, decreasing passenger vehicle VMT, and improving the convenience of clean transit. In 2045, operation of the alignment would reduce annual on-road VMT by approximately 49 million (Table 3.9-15). Metro identifies transportation mode shift as the primary mechanism of GHG-emissions displacement, and the expansion of public transit infrastructure is an essential element of statewide, regional, and local GHG emissions-reduction strategies within long-range planning objectives.

TABLE 3.9-15. KNE SAN VICENTE–FAIRFAX ALIGNMENT VEHICLE MILES TRAVELED

CONDITION	ANNUAL VEHICLE MILES TRAVELED
KNE San Vicente–Fairfax Alignment	214,090,029,819
Conditions without Project	214,139,478,194
Change in VMT due to Project	-49,448,375

Source: Connect Los Angeles Partners 2023
VMT = vehicle miles traveled

The alignment would be consistent with the AB 32 Scoping Plan, 2020 RTP/SCS, 2021 CalSTA CAPTI, Metro 2019 CAAP, Los County Angeles CCAP, City of Los Angeles Sustainable City pLAn and Green New Deal, and City of West Hollywood WeHo Climate Action Plan through achieving a net reduction in emissions, as analyzed in Table 3.9-4, thereby enhancing the Metro transit system's net displacement of GHG emissions and increasing access to clean transit. Operation of the alignment would not conflict with GHG-reduction plans, policies, or regulations. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.9.7.2.2 KNE FAIRFAX ALIGNMENT

3.9.7.2.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE Fairfax Alignment would temporarily generate GHG emissions. In accordance with Metro policies adopted to reduce GHG emissions during construction of Metro projects, project measures PM AQ-1 and PM AQ-3 would be implemented throughout construction to avoid and minimize GHG emissions by following equipment and fuel requirements. GHG emissions would be temporarily generated to construct an energy-efficient mass transit system that would reduce long-term regional GHG emissions, directly contributing to statewide and regional efforts to reduce fossil fuel use in transportation, decrease passenger vehicle VMT, and improve the convenience of clean transit. Construction of the alignment would not conflict with GHG-reduction plans, policies, or regulations. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.9.7.2.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE Fairfax Alignment would directly contribute to statewide, regional, and local efforts to reduce GHG emissions by reducing fossil fuel use in transportation, decreasing passenger vehicle VMT, and improving the convenience of clean transit. As shown in Table 3.9-16, the regional passenger vehicle VMT is forecasted to be reduced by approximately 47 million under the alignment as compared to the 2045 without Project Conditions. Metro identifies transportation mode shift as the primary mechanism of GHG-emissions displacement, and the expansion of public transit infrastructure is an essential element of statewide, regional, and local GHG emissions-reduction strategies within long-range planning objectives.

TABLE 3.9-16. KNE FAIRFAX ALIGNMENT VEHICLE MILES TRAVELED

CONDITION	ANNUAL VEHICLE MILES TRAVELED
KNE Fairfax Alignment	214,092,959,309
Conditions without Project	214,139,478,194
Change in VMT due to Project	-46,518,885

Source: Connect Los Angeles Partners 2023
VMT = vehicle miles traveled

The alignment would be consistent with the AB 32 Scoping Plan, 2020 RTP/SCS, 2021 CalSTA CAPTI, Metro 2019 CAAP, Los County Angeles CCAP, City of Los Angeles Sustainable City pLAn and Green New Deal, and City of West Hollywood WeHo Climate Action Plan through achieving a net reduction in emissions, as analyzed in Table 3.9-6, thereby enhancing the Metro transit system's net displacement of GHG emissions and increasing access to clean transit. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.9.7.2.3 KNE LA BREA ALIGNMENT

3.9.7.2.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE La Brea Alignment would temporarily generate GHG emissions. In accordance with Metro policies adopted to reduce GHG emissions during construction of Metro projects, project measures PM AQ-1 and PM AQ-3 would be implemented throughout construction to avoid and minimize GHG emissions by following equipment and fuel requirements. GHG emissions would be temporarily generated to construct an energy-efficient mass transit system that would reduce long-term regional GHG emissions, directly contributing to statewide and regional efforts to reduce fossil fuel use in transportation, decrease passenger vehicle VMT, and improve the convenience of clean transit. Construction of the alignment would not conflict with GHG-reduction plans, policies, or regulations. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.9.7.2.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE La Brea Alignment would directly contribute to statewide, regional, and local efforts to reduce GHG emissions by reducing fossil fuel use in transportation, decreasing passenger vehicle VMT, and improving the convenience of clean transit. As shown in Table 3.9-17, the regional passenger vehicle VMT is forecasted to be reduced by approximately 49 million under the alignment as compared to the 2045 without Project Conditions. Metro identifies transportation mode shift as the primary mechanism of GHG-emissions displacement, and the expansion of public transit infrastructure is an essential element of statewide, regional, and local GHG emissions-reduction strategies within long-range planning objectives.

TABLE 3.9-17. KNE LA BREA ALIGNMENT VEHICLE MILES TRAVELED

CONDITION	ANNUAL VEHICLE MILES TRAVELED
KNE La Brea Alignment	214,090,021,424
Conditions without Project	214,139,478,194
Change in VMT due to Project	-49,456,770

Source: Connect Los Angeles Partners 2023
VMT = vehicle miles traveled

The alignment would be consistent with the AB 32 Scoping Plan, 2020 RTP/SCS, 2021 CalSTA CAPTI, Metro 2019 CAAP, Los County Angeles CCAP, City of Los Angeles Sustainable City pLAn and Green New Deal, and City of West Hollywood WeHo Climate Action Plan through achieving a net reduction in emissions, as analyzed in Table 3.9-8, thereby enhancing the Metro transit system's net displacement of GHG emissions and increasing access to clean transit. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.9.7.2.4 HOLLYWOOD BOWL DESIGN OPTION

3.9.7.2.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the Hollywood Bowl Design Option would temporarily generate GHG emissions, which would cease upon completion of the LRT corridor. In accordance with Metro policies adopted to reduce GHG emissions during construction of Metro projects, project measures PM AQ-1 and PM AQ-3 would be implemented throughout construction to avoid and minimize GHG emissions by following equipment and fuel requirements. GHG emissions would be temporarily generated to construct an energy-efficient mass transit system that would reduce long-term regional GHG emissions, directly contributing to statewide and regional efforts to reduce fossil fuel use in transportation, decrease passenger vehicle VMT, and improve the convenience of clean transit. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.9.7.2.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the Hollywood Bowl Design Option would directly contribute to statewide, regional, and local efforts to reduce GHG emissions by improving the convenience of clean transit. The Metro Corridor Based Model 2018c forecasts that the addition of the Hollywood Bowl Design Option would not appreciably increase or decrease ridership of the light rail system, nor would it be expected to appreciably increase or decrease VMT relative to the alignments. The annual VMT would be reduced for all alignments as compared to 2045 without Project Conditions, as described for the alignments and design option. Metro identifies transportation mode shift as the primary mechanism of GHG-emissions displacement, and the expansion of public transit infrastructure is an essential element of statewide, regional, and local GHG emissions-reduction strategies within long-range planning objectives.

Operations of all alignments with the Hollywood Bowl Design Option would be consistent with the AB 32 Scoping Plan, 2020 RTP/SCS, 2021 CalSTA CAPTI, Metro 2019 CAAP, County of Los Angeles CCAP, City of Los Angeles Sustainable City pLAn and Green New Deal, and City of West Hollywood WeHo Climate Action Plan through achieving a net reduction in emissions as analyzed in Table 3.9-12, enhancing the Metro transit system's net displacement of GHG emissions and increasing access to clean transit. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.9.7.2.5 MAINTENANCE AND STORAGE FACILITY

3.9.7.2.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the MSF would temporarily generate GHG emissions, which would cease upon completion of the MSF. In accordance with Metro policies adopted to reduce GHG emissions during construction of Metro projects, project measures PM AQ-1 and PM AQ-3 would be implemented throughout construction to avoid and minimize GHG emissions by following equipment and fuel requirements. The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignments. As such, GHG emissions associated with MSF construction would be temporarily generated in service of an energy-efficient mass transit system that would reduce long-term regional GHG emissions, directly contributing to statewide and regional efforts to reduce fossil fuel use in transportation, decrease passenger vehicle VMT, and improve the convenience of clean transit. Therefore, the MSF would have a less than significant impact during construction.

3.9.7.2.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignments. Operation of the MSF would not increase or decrease ridership of the light rail system, nor would it be expected to appreciably increase or decrease VMT relative to the alignments. The annual VMT would be reduced for all alignments as compared to 2045 without Project Conditions, as described for the alignments and design option. Metro identifies transportation mode shift as the primary mechanism of GHG-emissions displacement, and the expansion of public transit infrastructure is an essential element of statewide, regional, and local GHG emissions-reduction strategies within long-range planning objectives. Increases of

emissions from MSF operational activities would be more than offset by the decrease in emissions from roadway vehicles resulting from operations.

Operation of all alignments with the MSF would be consistent with the AB 32 Scoping Plan, 2020 RTP/SCS, 2021 CalSTA CAPTI, Metro 2019 CAAP, County of Los Angeles CCAP, City of Los Angeles Sustainable City pLAn and Green New Deal, and City of West Hollywood WeHo Climate Action Plan through achieving a net reduction in emissions, as analyzed above in Impact GHG-1, enhancing the Metro transit system's net displacement of GHG emissions and increasing access to clean transit. Therefore, the MSF would have a less than significant impact during operation.

3.9.7.3 MITIGATION MEASURES

As the impact analysis above demonstrates, construction and operation of any of the KNE alignments and stations, the design option, and the MSF would result in a less than significant impact related to GHG emissions. Therefore, no mitigation is required under CEQA.

3.9.7.1 SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

Table 3.9-18 summarizes the GHG emissions impact significance conclusions and applicable mitigation measures. As indicated above, there are no significant GHG emissions impacts that would require mitigation.

TABLE 3.9-18. KNE SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

IMPACT		IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES				
		KNE SAN VICENTE–FAIRFAX ALIGNMENT	KNE FAIRFAX ALIGNMENT	KNE LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MAINTENANCE AND STORAGE FACILITY
Impact GHG-1: Emission Generation	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
Impact GHG-2: Conflicts with GHG-Reducing Plans, Policies, and Regulations	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS

Source: Connect Los Angeles Partners 2024
LTS = less than significant

3.10 GROWTH INDUCING IMPACTS

3.10.1 INTRODUCTION

This discussion provides an evaluation of K Line Northern Extension (KNE) as it relates to growth inducement. It includes descriptions of the federal, state, and local regulatory setting, existing conditions, and the impacts from construction and operation of the proposed alignments and stations, design option, and maintenance and storage facility (MSF), as well as mitigation measures where applicable. For more detailed information, refer to the KNE Growth Inducing Impacts Technical Report (Appendix 3.10-A).

3.10.2 REGULATORY FRAMEWORK

3.10.2.1 FEDERAL

There are no federal regulations applicable to the project regarding growth inducement.

3.10.2.2 STATE

The following state laws and regulations are relevant to construction and operation of the project:

- California Environmental Quality Act (CEQA) Section 15126.2[e])
- California Department of Transportation (Caltrans) guidance Caltrans Standard Environmental Reference, Guidance for Preparers of Growth-related, Indirect Impact Analyses (Caltrans 2006)
- Sustainable Communities and Climate Protection Act of 2008 (Senate Bill 375, Chapter 728)
- California Government Code Section 65300-65303.4

3.10.2.3 REGIONAL

In September 2020, the Southern California Association of Governments (SCAG) adopted the Connect SoCal – 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (2020 RTP/SCS), a long-range visioning plan that builds upon and expands land use and transportation strategies (SCAG 2020a). SCAG also prepares a Regional Housing Needs Assessment to determine the specific housing needs of its jurisdictions and plan to accommodate a growing population accordingly.

3.10.2.4 LOCAL

All Metro rail projects must be designed in accordance with the most recent Metro Rail Design Criteria (MRDC).

The City of Los Angeles has a General Plan Framework Element that is intended to guide the city's long-range growth and development. Policy 3.3.1 of the General Plan states: "Accommodate projected population and employment growth, using these as the basis for planning for and implementation of infrastructure improvements and public services" (City of Los Angeles 1995).

The Department of City Planning periodically produces the Growth and Infrastructure Report, which provides detailed information on demographics, development activity, infrastructure, and public facilities in the city.

The Hollywood Community Plan was recently updated and adopted by the Los Angeles City Council in May 2023. It does not seek to promote nor to hinder growth but accepts the likelihood that growth will occur and must be provided for. The preservation of lower-density residential areas is encouraged. The Hollywood Community Plan stipulates relevant guidelines, not limited to requirements for acreage of commercial use per 1,000 residents and limitations to population density based on the adequacy of nearby public transit options, and encourages the preservation and enhancement of well-defined residential neighborhoods in Hollywood.

The West Hollywood General Plan was adopted in September 2011 and provides a future vision that informs and is implemented by the city's various ordinances, specific plans, programs, and ongoing activities (City of West Hollywood 2011).

3.10.3 METHODOLOGY

3.10.3.1 CEQA METHODOLOGY

The purpose of this analysis is to evaluate the project against CEQA thresholds of significance as the basis for determining the level of impacts related to growth inducement. The growth inducement analysis considers population, household, and employment growth that would occur with implementation of the project and whether this growth is within local or regional forecasts or would cause a burden on planned resources. The assessment of the project's growth inducing potential uses the projections in the proposed station areas as a guide to assess whether potential growth associated with the project would be unanticipated.

3.10.3.2 SIGNIFICANCE THRESHOLDS

According to the 2022 CEQA Guidelines, growth inducement alone is not considered an environmental impact, but it may reasonably be anticipated to lead to environmental impacts (Association of Environmental Professionals 2023). Therefore, CEQA requires the analysis of a project's potential to induce growth. Section 15126.2(e) of the state CEQA Guidelines requires that environmental documents "… discuss the ways in which the project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment." Included in this definition are projects that would remove obstacles to population growth.

CEQA guidance does not specify thresholds for what constitutes a significant impact. For the purpose of this analysis, impacts are considered significant if they directly (through construction or operation of the project) or indirectly (through subsequent transit-oriented development [TOD]) lead to actions that create unanticipated demand for housing, community and public services, or additional infrastructure. Indirect or secondary effects are defined as effects caused by the project that occur later in time or are farther removed in distance but are still reasonably foreseeable. Such demands can arise if the induced growth occurs in locations for which it has not been planned, or is of a magnitude that exceeds planned capacities, or otherwise leads to a degradation of environmental quality, such as increased noise, water, or air quality.

In accordance with the 2022 CEQA Guidelines, the project would have a significant impact related to growth inducement if:

- Impact GRW-1: Operation and maintenance of the project would foster unanticipated economic growth or changes that are reasonably foreseen to diminish environmental quality.
- Impact GRW-2: Construction, operation, and maintenance of the project would foster unanticipated population growth or growth that is reasonably foreseen to diminish environmental quality.
- Impact GRW-3: Riders' use of the project would increase the attractiveness of proposed station areas to a degree that unanticipated economic development occurs or is reasonably foreseen to diminish environmental quality.
- Impact GRW-4: Operation of the project would lead to the transition of land uses inconsistent with planned uses within the resource study areas (RSAs).

3.10.4 RESOURCE STUDY AREA

To represent the areas where growth inducement or TOD are most probable for all alignments and stations, and for the design option, two RSAs were defined for each proposed station. The first is a 0.25-mile radius surrounding each station, and the second is a 0.5-mile radius surrounding each station. These 0.25-mile and 0.5-mile buffers reflect the typical average and the typical maximum walking distances for transit riders to access the stations. The MSF has a single 0.5-mile radius RSA because the users and functions of the MSF differ from those of the stations. Figure 3.10-1 through Figure 3.10-3 illustrate the RSAs for the three KNE alignments and stations. Figure 3.10-4 shows the RSA for the MSF.

FIGURE 3.10-1. KNE SAN VICENTE–FAIRFAX ALIGNMENT RESOURCE STUDY AREA

Source: Connect Los Angeles Partners 2024

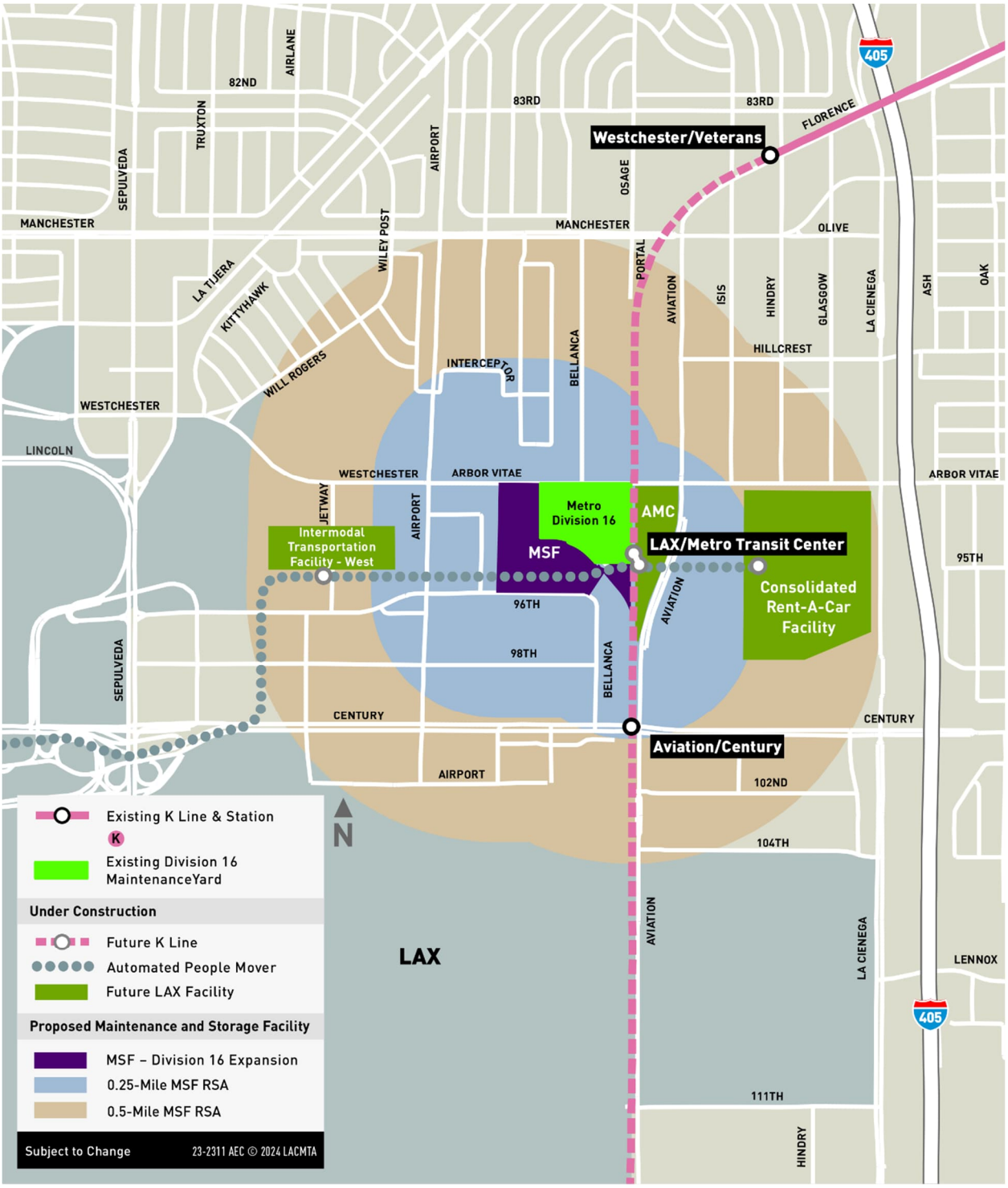
FIGURE 3.10-2. KNE FAIRFAX ALIGNMENT RESOURCE STUDY AREA

Source: Connect Los Angeles Partners 2024

FIGURE 3.10-3. KNE LA BREA ALIGNMENT RESOURCE STUDY AREA

Source: Connect Los Angeles Partners 2024

FIGURE 3.10-4. MAINTENANCE AND STORAGE FACILITY RESOURCE STUDY AREA



Source: Connect Los Angeles Partners 2024

3.10.5 EXISTING SETTING

This existing setting discussion summarizes current conditions related to growth inducement within and near the KNE RSA.

3.10.5.1 REGIONAL SETTING

SCAG is the largest metropolitan planning organization (MPO) in the nation, with nearly 19 million residents, representing a region of six counties: Los Angeles, Orange, Riverside, San Bernardino, Imperial, and Ventura and 191 cities in an area covering more than 38,000 square miles. This region is a major hub of global economic activity, representing the 16th largest economy in the world, and is considered the nation's gateway for international trade, with two of the largest ports in the nation (SCAG 2019).

In 2018, 53.7 percent of the total population of the SCAG region resided in Los Angeles County. The Cities of Los Angeles and West Hollywood are located in Los Angeles County. A diverse mix of land uses are located within the two cities, including single-family and multifamily residential neighborhoods, commercial and retail uses, offices, parks and recreational facilities, religious centers, health and medical uses, historical structures, an airport (Los Angeles International Airport), and educational institutions.

The area is currently served by multiple transit services. Services are provided by Metro, the Los Angeles Department of Transportation, Santa Monica Big Blue Bus, West Hollywood Cityline Shuttles, and the Antelope Valley Transit Authority. Transit service types include light rail transit, heavy rail transit, rapid bus, express bus, limited bus, and local bus lines.

From 2000 to 2021, the population of Los Angeles County grew from approximately 9.5 million residents to 10 million residents, as shown in Table 3.10-1. This equates to about 5.3 percent growth over the course of two decades, comparable to the 5.6 percent growth in the City of Los Angeles during the same window. The City of West Hollywood, however, experienced population loss between 2000 and 2021, at -0.1 percent. This can likely be attributed to a combination of factors, including zoning restrictions prioritizing single-family housing in the area, high cost of living, and areas approaching their zoned density capacities. Between 2000 and 2018, the median home sales price of existing homes in Los Angeles County increased 149 percent, from $251,400 to $625,000.

TABLE 3.10-1. POPULATION GROWTH

COUNTY/ CITY	POPULATION 2000	% CHANGE	POPULATION 2010	% CHANGE	POPULATION 2020	% CHANGE	POPULATION 2021	% CHANGE	POPULATION 2045
Los Angeles County	9,519,338	2.5	9,758,256	2.9	10,040,682	-0.2	10,019,635	16.5	11,669,601
City of Los Angeles	3,694,820	2.1	3,772,486	5.3	3,973,278	-1.8	3,902,440	22.1	4,764,720
City of West Hollywood	35,716	-3.0	34,657	2.4	35,506	0.5	35,678	19.9	42,774

Source: U.S. Census Bureau 2021; SCAG 2020a

Between 2020 and 2021, in the midst of the COVID-19 pandemic, the Los Angeles County and the City of Los Angeles experienced population loss, as did many American metropolitan cities. Similar rates are reflected in the number of households within Los Angeles County and the Cities of Los Angeles and West Hollywood, as shown in Table 3.10-2. In comparison, the state of California had a total population of approximately 36.6 million in 2010, 39.3 million in 2020, and 39.5 million in 2021 (U.S. Census Bureau, 2021). This equates to 7.4 percent growth between 2010 and 2020, and 0.3 percent growth between 2020 and 2021.

TABLE 3.10-2. HOUSEHOLD GROWTH

COUNTY/CITY	HOUSEHOLDS 2010	% CHANGE	HOUSEHOLDS 2020	% CHANGE	HOUSEHOLDS 2021	% CHANGE	HOUSEHOLDS 2045
Los Angeles County	3,217,889	3.6	3,332,504	0.3	3,342,811	23.2	4,117,087
City of Los Angeles	1,314,198	6.7	1,402,522	-1.3	1,384,851	29.3	1,790,355
City of West Hollywood	22,833	0.1	22,845	0.6	22,984	31.5	30,216

Source: U.S. Census Bureau 2021; SCAG 2020a

The 2020 SCAG Demographics and Growth Forecast (SCAG 2020b) predicts that, despite the region's continuing declining fertility, the region's population growth will consist mostly of natural increase (births minus deaths). The region is expected to lose more population to other parts of the country than it will gain, but a larger number of people is expected to be gained from international migration. However, the population in the region is aging, which can pose several challenges, such as caring for an older population and ensuring tax revenues with fewer workers.

Population in Los Angeles County is predicted to reach nearly 11.7 million in 2045, as shown in Table 3.10-1, a 16.5 percent increase from 2021. The Cities of Los Angeles and West Hollywood are predicted to grow at even higher rates: 22.1 percent and 19.9 percent, respectively. Approximately 4.8 million people are projected to live within the boundaries of the City of Los Angeles in 2045.

Households will see even higher growth rates, as shown in Table 3.10-2. Annual household growth is expected to outpace both population and employment growth as a result of the Millennial generation's growing household formation and an anticipation of more housing construction. Household sizes, however, are expected to decrease from an average of 3.10 residents in 2016 to 2.90 in 2045 (SCAG 2020b).

Employment within the area, with the exception of West Hollywood, has grown at a much faster pace than population or households (Table 3.10-3).

TABLE 3.10-3. EMPLOYMENT GROWTH

COUNTY/CITY	EMPLOYMENT 2012	% CHANGE	EMPLOYMENT 2019	% CHANGE	EMPLOYMENT 2045
Los Angeles County	4,237,721	13.8	4,823,739	11.5	5,379,173
City of Los Angeles	1,697,862	11.1	1,886,176	13.3	2,136,422
City of West Hollywood	28,603	-12.0	25,161	52.7	38,417

Source: SCAG 2020a

Despite the aging of the population, stable growth in employment is expected in the long term. Table 3.10-3 details forecasted growth in employment from 2012 to 2045. As shown in the table, the City of West Hollywood is expected to see an increase in jobs by roughly 50 percent from 2019, a reversal of the 12 percent decrease in employment from 2012 to 2019. Employment growth in Los Angeles County and the City of Los Angeles, however, is forecasted to approximately follow the historical growth rate. The large percentage change in the number of jobs in the City of West Hollywood is due to the relatively lower level of existing employment. The City of Los Angeles and Los Angeles County are expected to see about 250,000 and 555,000 new jobs, respectively, between 2019 and 2045, but have comparatively larger existing employment bases, while the City of West Hollywood will add about 13,000 new jobs in that timespan (SCAG 2020a). However, the loss or gain of a few thousand jobs is more impactful to the overall employment in the City of West Hollywood.

3.10.5.1.1 ALIGNMENTS AND STATIONS

3.10.5.1.1.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

A summary of existing population, households, and employment within 0.25 and 0.5 mile of the proposed stations for the KNE San Vicente–Fairfax Alignment is provided in Table 3.10-4 through Table 3.10-9. Existing growth conditions for each station RSA are described in the subsections following the tables.

TABLE 3.10-4. POPULATION WITHIN 0.5 MILE OF PROPOSED STATIONS: KNE SAN VICENTE–FAIRFAX ALIGNMENT

ALIGNMENT/STATION	POPULATION 2010	% CHANGE	POPULATION 2020	% CHANGE	POPULATION 2021	% CHANGE	POPULATION 2045
KNE SAN VICENTE–FAIRFAX ALIGNMENT							
Expo/Crenshaw (Existing)	8,878	0.7	8,940	-3.3	8,643	40.5	12,142
Crenshaw/Adams Station	11,698	-4.4	11,183	-2.0	10,955	60.5	17,579
Midtown Crossing Station	11,708	-5.8	11,029	-1.7	10,846	49.2	16,177
Wilshire/Fairfax Station	9,979	4.9	10,465	-1.4	10,315	62.1	16,717
Fairfax/3rd Station	10,110	3.4	10,458	-0.5	10,410	42.1	14,788
La Cienega/Beverly Station	8,486	1.6	8,621	-5.2	8,173	54.5	12,625
San Vicente/Santa Monica Station	11,079	-1.5	10,912	2.0	11,129	23.8	13,775
Fairfax/Santa Monica Station	14,740	6.5	15,691	-0.7	15,575	20.5	18,765
La Brea/Santa Monica Station	13,091	-5.2	12,404	0.5	12,467	15.1	14,348
Hollywood/Highland Station	14,945	-0.1	14,924	-4.8	14,207	37.9	19,596
Hollywood Bowl Design Option	6,441	-1.0	6,374	-6.2	5,977	65.0	9,860
Alignment Totals[1]	**108,521**	**-0.1**	**108,374**	**-1.7**	**106,546**	**36.9**	**145,812**

Source: U.S. Census Bureau 2021; SCAG 2020a

[1] Due to overlapping station RSAs, as shown in Figure 3.10-1, the KNE San Vicente–Fairfax Alignment corridor totals are less than the summation of all the station RSAs combined as the corridor total does not account for redundancy in data.

TABLE 3.10-5. POPULATION WITHIN 0.25 MILE OF PROPOSED STATIONS: KNE SAN VICENTE–FAIRFAX ALIGNMENT

ALIGNMENT/STATION	POPULATION 2010	% CHANGE	POPULATION 2020	% CHANGE	POPULATION 2021	% CHANGE	POPULATION 2045
KNE SAN VICENTE–FAIRFAX ALIGNMENT							
Expo/Crenshaw (Existing)	1,973	4.8	2,067	-4.6	1,972	37.1	2,704
Crenshaw/Adams Station	3,115	-7.5	2,880	-0.6	2,863	61.5	4,625
Midtown Crossing Station	2,696	-4.2	2,584	-3.2	2,501	65.3	4,133
Wilshire/Fairfax Station	2,210	10.4	2,439	-1.6	2,399	60.9	3,859
Fairfax/3rd Station	1,959	11.9	2,193	0.9	2,212	44.6	3,199
La Cienega/Beverly Station	2,026	3.1	2,088	-5.7	1,969	38.2	2,721
San Vicente/Santa Monica Station	2,876	-1.3	2,839	1.4	2,879	22.6	3,529
Fairfax/Santa Monica Station	4,369	4.2	4,553	1.2	4,608	24.8	5,752
La Brea/Santa Monica Station	3,166	-7.1	2,940	4.8	3,081	6.1	3,270
Hollywood/Highland Station	3,985	-2.4	3,891	-6.4	3,642	26.0	4,589
Hollywood Bowl Design Option	1,157	0.2	1,159	-5.5	1,095	83.7	2,011
Totals	**29,532**	**0.3**	**29,633**	**-1.4**	**29,221**	**38.2**	**40,392**

Source: U.S. Census Bureau 2021; SCAG 2020a

TABLE 3.10-6. HOUSEHOLDS WITHIN 0.5 MILE OF PROPOSED STATIONS: KNE SAN VICENTE–FAIRFAX ALIGNMENT

ALIGNMENT/STATION	HOUSEHOLD 2010	% CHANGE	HOUSEHOLD 2020	% CHANGE	HOUSEHOLD 2021	% CHANGE	HOUSEHOLD 2045
KNE SAN VICENTE–FAIRFAX ALIGNMENT							
Expo/Crenshaw (Existing)	3,546	3.7	3,676	-2.3	3,593	49.0	5,354
Crenshaw/Adams Station	4,122	7.3	4,422	-1.9	4,340	63.1	7,077
Midtown Crossing Station	4,092	4.3	4,270	-4.2	4,092	46.1	5,977
Wilshire/Fairfax Station	5,284	-4.3	5,055	1.3	5,121	68.1	8,610
Fairfax/3rd Station	5,268	-3.7	5,072	0.0	5,074	52.4	7,735
La Cienega/Beverly Station	4,780	1.5	4,851	-4.0	4,657	55.6	7,244
San Vicente/Santa Monica Station	7,494	-5.2	7,101	1.1	7,178	38.2	9,918
Fairfax/Santa Monica Station	9,086	6.2	9,646	-1.4	9,507	29.3	12,288
La Brea/Santa Monica Station	7,309	-2.4	7,133	0.1	7,142	15.0	8,216
Hollywood/Highland Station	8,956	3.9	9,307	-3.6	8,972	26.4	11,337
Hollywood Bowl Design Option	3,685	1.6	3,744	-2.4	3,656	52.5	5,574
Totals[1]	**56,955**	**1.3**	**57,696**	**-1.5**	**56,836**	**38.2%**	**78,575**

Source: U.S. Census Bureau 2021; SCAG 2020a

[1] Due to overlapping station RSAs, as shown in Figure 3.10-1, the KNE San Vicente–Fairfax Alignment corridor totals are less than the summation of all the station RSAs combined as the corridor total does not account for redundancy in data.

TABLE 3.10-7. HOUSEHOLDS WITHIN 0.25 MILE OF PROPOSED STATIONS: KNE SAN VICENTE–FAIRFAX ALIGNMENT

ALIGNMENT/STATION	HOUSEHOLD 2010	% CHANGE	HOUSEHOLD 2020	% CHANGE	HOUSEHOLD 2021	% CHANGE	HOUSEHOLD 2045
KNE SAN VICENTE–FAIRFAX ALIGNMENT							
Expo/Crenshaw (Existing)	804	6.0	852	-3.6	821	47.7	1,213
Crenshaw/Adams Station	1,074	7.1	1,150	-1.8	1,129	67.1	1,886
Midtown Crossing Station	965	6.4	1,027	-5.0	976	60.5	1,566
Wilshire/Fairfax Station	1,234	-0.2	1,232	1.4	1,249	63.5	2,042
Fairfax/3rd Station	1,054	0.2	1,056	-1.0	1,045	63.3	1,707
La Cienega/Beverly Station	1,092	4.0	1,136	-4.9	1,080	35.2	1,460
San Vicente/Santa Monica Station	1,981	-6.0	1,863	1.0	1,881	41.2	2,656
Fairfax/Santa Monica Station	2,703	6.8	2,887	-0.5	2,874	34.9	3,876
La Brea/Santa Monica Station	1,730	3.2	1,785	2.7	1,834	9.2	2,003
Hollywood/Highland Station	2,425	3.9	2,520	-4.3	2,411	9.9	2,650
Hollywood Bowl Design Option	634	-1.7	623	-3.2	603	94.2	1,171
Totals	**15,696**	**2.8**	**16,131**	**-1.4**	**15,903**	**39.8**	**22,230**

Source: U.S. Census Bureau 2021; SCAG 2020a

TABLE 3.10-8. EMPLOYMENT WITHIN 0.5 MILE OF PROPOSED STATIONS: KNE SAN VICENTE–FAIRFAX ALIGNMENT

ALIGNMENT/STATION	EMPLOYMENT 2012	% CHANGE	EMPLOYMENT 2019	% CHANGE	EMPLOYMENT 2045
KNE SAN VICENTE–FAIRFAX ALIGNMENT					
Expo/Crenshaw (Existing)	3,463	-20.8	2,743	26.4	3,467
Crenshaw/Adams Station	2,268	-6.9	2,112	19.6	2,526
Midtown Crossing Station	3,287	-2.1	3,219	21.1	3,897
Wilshire/Fairfax Station	14,590	6.1	15,474	6.2	16,441
Fairfax/3rd Station	15,168	-2.8	14,742	6.5	15,696
La Cienega/Beverly Station	17,080	80.9	30,895	6.1	32,771
San Vicente/Santa Monica Station	14,185	-5.9	13,343	46.2	19,510
Fairfax/Santa Monica Station	5,492	-22.9	4,235	49.5	6,331
La Brea/Santa Monica Station	8,861	12.9	10,004	42.6	14,269
Hollywood/Highland Station	15,608	30.5	20,373	3.0	20,984
Hollywood Bowl Design Option	1,293	15.1	1,488	17.4	1,747
Totals[1]	**94,606**	**17.1**	**110,813**	**16.6**	**129,261**

Source: SCAG 2020a

[1] Due to overlapping station RSAs, as shown in Figure 3.10-1, the KNE San Vicente–Fairfax Alignment corridor totals are less than the summation of all the station RSAs combined as the corridor total does not account for redundancy in data.

TABLE 3.10-9. EMPLOYMENT WITHIN 0.25 MILE OF PROPOSED STATIONS: KNE SAN VICENTE–FAIRFAX ALIGNMENT

ALIGNMENT/STATION	EMPLOYMENT 2012	% CHANGE	EMPLOYMENT 2019	% CHANGE	EMPLOYMENT 2045
KNE SAN VICENTE–FAIRFAX ALIGNMENT					
Expo/Crenshaw (Existing)	960	-25.7	713	27.2	907
Crenshaw/Adams Station	729	-15.1	619	16.6	722
Midtown Crossing Station	875	8.7	951	20.7	1,148
Wilshire/Fairfax Station	2,908	18.0	3,431	8.9	3,736
Fairfax/3rd Station	4,611	-8.9	4,199	8.7	4,563
La Cienega/Beverly Station	6,129	123.0	13,668	3.1	14,095
San Vicente/Santa Monica Station	4,176	-8.0	3,844	35.9	5,225
Fairfax/Santa Monica Station	1,764	-18.3	1,442	49.7	2,158
La Brea/Santa Monica Station	2,804	15.9	3,250	31.8	4,282
Hollywood/Highland Station	5,973	47.8	8,829	1.4	8,955
Hollywood Bowl Design Option	203	29.6	263	38.0	363
Totals	**31,132**	**32.4**	**41,209**	**12.0**	**46,154**

Source: SCAG 2020a

CRENSHAW/ADAMS STATION

Despite a decline in population between 2010 and 2021, population is expected to increase about 60 percent from 2021 to 2045 in both the 0.25- and 0.5-mile RSAs surrounding the proposed Crenshaw/Adams Station. In 2045, almost 18,000 people are expected to reside within the 0.5-mile RSA surrounding the station. However, only around 4,600 of the 18,000 will reside within 0.25 mile of the station.

The number of households is expected to increase at similar rates with over 7,000 households in 2045 within the 0.5-mile RSA surrounding the station. About 2,000 households will reside within 0.25 mile of the station. Sites along Adams Boulevard and Crenshaw Boulevard are primarily designated as Neighborhood Commercial with a higher intensity of Community Commercial land use at the intersection and the proposed station location, explaining the population and household differences between the 0.25- and 0.5-mile RSAs.

Employment fell 15 percent and seven percent in the 0.25- and 0.5-mile RSAs, respectively, between 2012 and 2019. However, employment is expected to grow from around 2,100 jobs in 2019 to 2,500 jobs in 2045, suggesting small but steady increases.

MIDTOWN CROSSING STATION

Despite a decline in population between 2010 and 2021, population is expected to increase about 65 percent and 49 percent from 2021 to 2045 in the 0.25- and 0.5-mile RSAs surrounding the proposed Midtown Crossing Station, respectively. The 0.5-mile population was slightly under 11,000 people as of 2021. In 2045, over 17,000 people are expected to reside within the 0.5-mile RSA surrounding the station. However, only around 4,000 of the 16,000 will reside within 0.25 mile of the station, although the 0.25-mile RSA expects to see larger increases in growth by percentage.

The number of households is expected to increase at similar rates with almost 6,000 households in 2045 within the 0.5-mile RSA surrounding the station. About 1,600 households will reside within 0.25 mile of the station. The Midtown Crossing Station is located between two commercial shopping centers, the Midtown Shopping Center and the Midtown Crossing Shopping Center, and is surrounded by low- to medium-density residential neighborhoods.

Employment fell slightly in the 0.5-mile RSA between 2012 and 2019 but grew by almost nine percent in the 0.25-mile RSA. Employment is expected to grow from around 3,200 jobs in 2019 to 3,900 jobs in 2045, suggesting small but steady increases over time.

The Midtown Crossing Station 0.5-mile RSA has pedestrian and cyclist obstacles due to long blocks, narrow sidewalks, swiftly moving cars, street inclines, property grading, and blank or empty street edges. The topography slopes up toward the southeast with a moderate grade change, creating challenges for pedestrians and cyclists. This has potential to become a larger challenge as population increases.

WILSHIRE/FAIRFAX STATION

The Miracle Mile neighborhood includes major commercial throughfares such as Wilshire Boulevard and Fairfax Avenue. Museum Row on Wilshire Boulevard is a popular destination and major activity center that includes the Los Angeles County Museum of Art, the Academy Museum of Motion Pictures, the Petersen Automotive Museum, and the La Brea Tar Pits and Museum. The proposed station is adjacent to Johnie's Coffee Shop, a site designated as a Historic-Cultural Monument by the Los Angeles Conservancy. Additionally, within the 0.5-mile station RSA, there are two Historic Preservation Overlay Zones: Carthay Circle and Miracle Mile.

Outside of a small decline (<2 percent) in population between 2020 and 2021, likely associated with the COVID-19 pandemic, the population in both the 0.25- and 0.5-mile RSAs surrounding the Wilshire/Fairfax Station has experienced positive (albeit small) overall growth since 2010. The population is expected to grow more than 60 percent in both RSAs between 2021 and 2045. In 2045, almost 17,000 people are expected to reside within the 0.5-mile RSA surrounding the station. However, only around 4,000 of the 17,000 will reside within 0.25 mile of the station.

The number of households is expected to increase at similar rates with over 8,600 households in 2045 within the 0.5-mile RSA surrounding the station. About 2,000 households will reside within 0.25 mile of the station. The Wilshire/Fairfax Station 0.5-mile RSA primarily consists of residential land uses.

Employment grew 18 percent and six percent in the 0.25- and 0.5-mile RSAs, respectively, between 2012 and 2019. Continued growth in employment is predicted, from around 15,500 jobs in 2019 to 16,400 jobs in 2045 within the 0.5-mile RSA, suggesting small but steady increases.

FAIRFAX/3RD STATION

The population in both the 0.25- and 0.5-mile RSAs surrounding the Fairfax/3rd Station has experienced positive (albeit small) overall growth since 2010. In 2045, almost 15,000 people are expected to reside within the 0.5-mile RSA surrounding the station, up from 10,400 in 2021. However, only around 3,000 of the 15,000 will reside within 0.25 mile of the station.

The number of households is expected to increase as well, with almost 8,000 households in 2045 within the 0.5-mile RSA surrounding the station, up considerably from 5,000 in 2021. About 1,700 households will reside within 0.25 mile of the station in 2045. A third of the land use surrounding the 0.5-mile radius of Fairfax Avenue and 3rd Street consists of low-density housing. Per the Wilshire Community Plan (City of Los Angeles 2016), the general surrounding area is primarily medium-density housing.

Employment fell nine percent and three percent in the 0.25- and 0.5-mile RSAs, respectively, between 2012 and 2019. However, employment is expected to grow from around 14,700 jobs in 2019 to 15,700 jobs in 2045, suggesting small but steady increases. According to the TVC2050 Project Initial Study (Television City Studios 2022), CBS Television City, about 0.25 mile north of the proposed station, is projected to employ approximately 7,000 employees by 2043 and would serve as a major activity center. The Original Farmers Market and the Grove Shopping Center are also major destinations within the Fairfax/3rd Station 0.5-mile RSA that combined draw approximately 20 million annual visitors.

LA CIENEGA/BEVERLY STATION

The proposed La Cienega/Beverly Station would provide access to Cedars-Sinai Medical Center, one of the largest employers in Los Angeles County, and to supporting medical offices and facilities. Annually, the regional medical center sees 800,000 outpatient visits, 90,000 emergency visits, and has 14,000 full-time staff (Cedars-Sinai 2018). The proposed station would also provide access to regional shopping centers, the Beverly Center, and Beverly Connection. The retail destinations along Beverly Boulevard and 3rd Street create a regional retail center.

Outside of a roughly five percent decline in population between 2020 and 2021, likely associated with the COVID-19 pandemic, the population in both the 0.25- and 0.5-mile RSAs surrounding the proposed La Cienega/Beverly Station has experienced positive (albeit small) overall growth since 2010. The population is expected to grow approximately 40 percent and 50 percent in the 0.25- and 0.5-mile RSAs, respectively, between 2021 and 2045. In 2045, more than 12,600 people are expected to reside within the 0.5-mile RSA surrounding the station. However, only around 2,700 of the 12,600 will reside within 0.25 mile of the station.

The number of households is expected to increase at similar rates with over 7,000 households in 2045 within the 0.5-mile RSA surrounding the station. About 1,500 households will reside within 0.25 mile of the station.

Employment grew substantially between 2012 and 2019, seeing growth rates at roughly 120 percent and 80 percent in the 0.25- and 0.5-mile RSAs, respectively. This growth is predicted to largely taper off, with only six percent in total growth from 2019 to 2045 in the 0.5-mile RSA. In 2019, the number of jobs was almost 31,000, and in 2045 this number is predicted to reach nearly 33,000.

Although the proposed La Cienega/Beverly Station is located within the City of Los Angeles, the station 0.5-mile RSA falls within both the City of Los Angeles and the City of West Hollywood, northwest of the station RSA. The northwest quadrant of the station RSA is characterized by single-family residential neighborhoods in the City of West Hollywood (City of West Hollywood General Plan 2011). Planned projects include a combination of medium-density mixed-use developments along with residential, commercial, and a hospital development.

SAN VICENTE/SANTA MONICA STATION

The San Vicente/Santa Monica Station RSAs are located in the City of West Hollywood and contain major destinations, including the West Hollywood Rainbow District along Santa Monica Boulevard, the Melrose Avenue commercial corridor to the south, the Sunset Strip to the north, and the Pacific Design Center. The proposed station is surrounded by dense residential uses and would also provide access to public facilities, including West Hollywood Park and West Hollywood Library.

Following a small overall decline in population between 2010 and 2020, the population in both the 0.25- and 0.5-mile RSAs surrounding the San Vicente/Santa Monica Station grew marginally between 2020 and 2021, contradicting the pandemic trends of declining populations in nearby areas. Population is predicted to increase further from 2021 to 2045, at about 23 percent in both the 0.25- and 0.5-mile RSAs. In 2045,

almost 14,000 people are expected to reside within the 0.5-mile RSA surrounding the station. However, only around 3,500 of the 14,000 will reside within 0.25 mile of the station.

The number of households is expected to increase at even higher rates, approximately 40 percent growth between 2021 and 2045 with almost 10,000 households in 2045 within the 0.5-mile RSA surrounding the station. About 2,700 households will reside within 0.25 mile of the station.

Employment fell eight percent and six percent in the 0.25- and 0.5-mile RSAs, respectively, between 2012 and 2019. However, employment in the 0.5-mile RSA is expected to grow from around 13,000 jobs in 2019 to 19,500 jobs in 2045, suggesting steady increases over time.

FAIRFAX/SANTA MONICA STATION

The population in both the 0.25- and 0.5-mile RSAs surrounding the proposed Fairfax/Santa Monica Station has experienced positive (albeit small) overall growth since 2010. In 2045, almost 19,000 people are expected to reside within the 0.5-mile RSA surrounding the station. However, only around 6,000 of the 19,000 will reside within 0.25 mile of the station.

The number of households is expected to increase at even higher rates with over 12,000 households in 2045 within the 0.5-mile RSA surrounding the station. About 4,000 households will reside within 0.25 mile of the station.

Employment fell substantially at 18 percent and 23 percent in the 0.25- and 0.5-mile RSAs, respectively, between 2012 and 2019. However, employment is expected to grow from around 4,000 jobs in 2019 to 6,000 jobs in 2045 within the 0.5-mile RSA, suggesting steady increases over time. The proposed station RSAs serve mostly residential uses, with neighborhood-oriented commercial and retail along Santa Monica Boulevard and Fairfax Avenue and the Melrose Avenue retail corridor to the south.

LA BREA/SANTA MONICA STATION

The proposed La Brea/Santa Monica Station RSAs capture a variety of residential, commercial, and industrial uses. Notable community features within the station 0.5-mile RSA include the West Hollywood Gateway shopping center, Plummer Park, Poinsettia Recreation Center, the Sycamore District, the American Academy of Dramatic Arts, elementary schools, and synagogues.

Following an overall decline in population between 2010 and 2020, the population in both the 0.25- and 0.5-mile RSAs surrounding the proposed La Brea/Santa Monica Station grew marginally between 2020 and 2021, contradicting the pandemic trends of nearby areas. Population is predicted to increase further from 2021 to 2045, by about six percent and 15 percent in the 0.25- and 0.5-mile RSAs, respectively. In 2045, over 14,000 people are expected to reside within the 0.5-mile RSA surrounding the station. However, only around 3,000 of the 14,000 will reside within 0.25 mile of the station.

The number of households is expected to increase at similar rates with over 8,000 households in 2045 within the 0.5-mile RSA surrounding the station. About 2,000 households will reside within 0.25 mile of the station.

Employment increased by 16 percent and 13 percent in the 0.25- and 0.5-mile RSAs, respectively, between 2012 and 2019. Continued growth in employment is predicted from around 10,000 jobs in 2019 to over 14,000 jobs in 2045 within the 0.5-mile RSA.

HOLLYWOOD/HIGHLAND STATION

The proposed Hollywood/Highland Station is located within an iconic tourist district and is surrounded by dense residential neighborhoods. The intersection of Hollywood Boulevard and Highland Avenue includes major destinations such as the Dolby Theatre, the TCL Chinese Theatre, the Hollywood Museum, the El Capitan Theatre, and the Hollywood Walk of Fame. Also within the station RSAs are Hollywood High School, religious centers, and historic structures such as the Hollywood Roosevelt Hotel. High-density residential uses occur throughout the majority of the 0.5-mile station RSA.

Despite a decline in population between 2010 and 2021, population is expected to increase about 26 percent and 38 percent from 2021 to 2045 in the 0.25- and 0.5-mile RSAs surrounding the Hollywood/Highland Station, respectively. In 2045, about 19,600 people are expected to reside within the 0.5-mile RSA surrounding the station. However, only around 4,600 of the 19,600 people will reside within 0.25 mile of the station.

The number of households is expected to increase at similar rates with over 11,000 households in 2045 within the 0.5-mile RSA surrounding the station. About 2,700 households will reside within 0.25 mile of the station.

Employment grew substantially between 2012 and 2019, seeing growth rates at roughly 48 percent and 31 percent in the 0.25- and 0.5-mile RSAs, respectively. This growth is predicted to largely taper off, with only three percent total growth from 2019 to 2045 in the 0.5-mile RSA. In 2019, the number of jobs was almost 20,400, and in 2045 this number is predicted to reach nearly 21,000.

3.10.5.1.1.2 KNE FAIRFAX ALIGNMENT

A summary of existing population, households, and employment within 0.25 and 0.5 mile of the proposed stations for the KNE Fairfax Alignment is provided in Table 3.10-10 through Table 3.10-15.

TABLE 3.10-10. POPULATION WITHIN 0.5 MILE OF STATIONS: KNE FAIRFAX ALIGNMENT

ALIGNMENT/STATION	POPULATION 2010	% CHANGE	POPULATION 2020	% CHANGE	POPULATION 2021	% CHANGE	POPULATION 2045
KNE FAIRFAX ALIGNMENT							
Expo/Crenshaw (Existing)	8,878	0.7	8,940	-3.3	8,643	40.5	12,142
Crenshaw/Adams Station	11,698	-4.4	11,183	-2.0	10,955	60.5	17,579
Midtown Crossing Station	11,708	-5.8	11,029	-1.7	10,846	49.2	16,177
Wilshire/Fairfax Station	9,979	4.9	10,465	-1.4	10,315	62.1	16,717
Fairfax/3rd Station	10,110	3.4	10,458	-0.5	10,410	42.1	14,788
Fairfax/Santa Monica Station	14,740	6.5	15,691	-0.7	15,575	20.5	18,765
La Brea/Santa Monica Station	13,091	-5.2	12,404	0.5	12,467	15.1	14,348
Hollywood/Highland Station	14,945	-0.1	14,924	-4.8	14,207	37.9	19,596
Hollywood Bowl Design Option	6,441	-1.0	6,374	-6.2	5,977	65.0	9,860
Totals[1]	**90,258**	**-0.2**	**90,118**	**-1.8**	**88,483**	**36.9**	**121,136**

Source: U.S. Census Bureau 2021; SCAG 2020a

[1] Due to overlapping station RSAs, as shown in Figure 3.10-2, the KNE Fairfax Alignment corridor totals are less than the summation of all the station RSAs combined as the corridor total does not account for redundancy in data.

TABLE 3.10-11. POPULATION WITHIN 0.25 MILE OF STATIONS: KNE FAIRFAX ALIGNMENT

ALIGNMENT/STATION	POPULATION 2010	% CHANGE	POPULATION 2020	% CHANGE	POPULATION 2021	% CHANGE	POPULATION 2045
KNE FAIRFAX ALIGNMENT							
Expo/Crenshaw (Existing)	1,973	4.8	2,067	-4.6	1,972	37.1	2,704
Crenshaw/Adams Station	3,115	-7.5	2,880	-0.6	2,863	61.5	4,625
Midtown Crossing Station	2,696	-4.2	2,584	-3.2	2,501	65.3	4,133
Wilshire/Fairfax Station	2,210	10.4	2,439	-1.6	2,399	60.9	3,859
Fairfax/3rd Station	1,959	11.9	2,193	0.9	2,212	44.6	3,199
Fairfax/Santa Monica Station	4,369	4.2	4,553	1.2	4,608	24.8	5,752
La Brea/Santa Monica Station	3,166	-7.1	2,940	4.8	3,081	6.1	3,270
Hollywood/Highland Station	3,985	-2.4	3,891	-6.4	3,642	26.0	4,589
Hollywood Bowl Design Option	1,157	0.2	1,159	-5.5	1,095	83.7	2,011
Totals	**24,630**	**0.3**	**24,706**	**-1.3**	**24,373**	**40.1**	**34,142**

Source: U.S. Census Bureau 2021; SCAG 2020a

TABLE 3.10-12. HOUSEHOLDS WITHIN 0.5 MILE OF STATIONS: KNE FAIRFAX ALIGNMENT

ALIGNMENT/STATION	HOUSEHOLD 2010	% CHANGE	HOUSEHOLD 2020	% CHANGE	HOUSEHOLD 2021	% CHANGE	HOUSEHOLD 2045
KNE FAIRFAX ALIGNMENT							
Expo/Crenshaw (Existing)	3,546	3.7	3,676	-2.3	3,593	49.0	5,354
Crenshaw/Adams Station	4,122	7.3	4,422	-1.9	4,340	63.1	7,077
Midtown Crossing Station	4,092	4.3	4,270	-4.2	4,092	46.1	5,977
Wilshire/Fairfax Station	5,284	-4.3	5,055	1.3	5,121	68.1	8,610
Fairfax/3rd Station	5,268	-3.7	5,072	0.0	5,074	52.4	7,735
Fairfax/Santa Monica Station	9,086	6.2	9,646	-1.4	9,507	29.3	12,288
La Brea/Santa Monica Station	7,309	-2.4	7,133	0.1	7,142	15.0	8,216
Hollywood/Highland Station	8,956	3.9	9,307	-3.6	8,972	26.4	11,337
Hollywood Bowl Design Option	3,685	1.6	3,744	-2.4	3,656	52.5	5,574
Totals[1]	**45,466**	**2.2**	**46,488**	**-1.6**	**45,735**	**36.6**	**62,472**

Source: U.S. Census Bureau 2021; SCAG 2020a

[1] Due to overlapping station RSAs, as shown in Figure 3.10-2, the KNE Fairfax Alignment corridor totals are less than the summation of all the station RSAs combined as the corridor total does not account for redundancy in data.

TABLE 3.10-13. HOUSEHOLDS WITHIN 0.25 MILE OF STATIONS: KNE FAIRFAX ALIGNMENT

ALIGNMENT/STATION	HOUSEHOLD 2010	% CHANGE	HOUSEHOLD 2020	% CHANGE	HOUSEHOLD 2021	% CHANGE	HOUSEHOLD 2045
KNE FAIRFAX ALIGNMENT							
Expo/Crenshaw (Existing)	804	6.0	852	-3.6	821	47.7	1,213
Crenshaw/Adams Station	1,074	7.1	1,150	-1.8	1,129	67.1	1,886
Midtown Crossing Station	965	6.4	1,027	-5.0	976	60.5	1,566
Wilshire/Fairfax Station	1,234	-0.2	1,232	1.4	1,249	63.5	2,042
Fairfax/3rd Station	1,054	0.2	1,056	-1.0	1,045	63.3	1,707
Fairfax/Santa Monica Station	2,703	6.8	2,887	-0.5	2,874	34.9	3,876
La Brea/Santa Monica Station	1,730	3.2	1,785	2.7	1,834	9.2	2,003
Hollywood/Highland Station	2,425	3.9	2,520	-4.3	2,411	9.9	2,650
Hollywood Bowl Design Option	634	-1.7	623	-3.2	603	94.2	1,171
Totals	**12,623**	**4.0**	**13,132**	**-1.4**	**12,942**	**40.0**	**18,114**

Source: U.S. Census Bureau 2021; SCAG 2020a

TABLE 3.10-14. EMPLOYMENT WITHIN 0.5 MILE OF STATIONS: KNE FAIRFAX ALIGNMENT

ALIGNMENT/STATION	EMPLOYMENT 2012	% CHANGE	EMPLOYMENT 2019	% CHANGE	EMPLOYMENT 2045
KNE FAIRFAX ALIGNMENT					
Expo/Crenshaw (Existing)	3,463	-20.8	2,743	26.4	3,467
Crenshaw/Adams Station	2,268	-6.9	2,112	19.6	2,526
Midtown Crossing Station	3,287	-2.1	3,219	21.1	3,897
Wilshire/Fairfax Station	14,590	6.1	15,474	6.2	16,441
Fairfax/3rd Station	15,168	-2.8	14,742	6.5	15,696
Fairfax/Santa Monica Station	5,492	-22.9	4,235	49.5	6,331
La Brea/Santa Monica Station	8,861	12.9	10,004	42.6	14,269
Hollywood/Highland Station	15,608	30.5	20,373	3.0	20,984
Hollywood Bowl Design Option	1,293	15.1	1,488	17.4	1,747
Totals[1]	**64,708**	**5.5**	**68,277**	**15.3**	**78,727**

Source: SCAG 2020a

[1] Due to overlapping station RSAs, as shown in Figure 3.10-2, the KNE Fairfax Alignment corridor totals are less than the summation of all the station RSAs combined as the corridor total does not account for redundancy in data.

TABLE 3.10-15. EMPLOYMENT WITHIN 0.25 MILE OF STATIONS: KNE FAIRFAX ALIGNMENT

ALIGNMENT/STATION	EMPLOYMENT 2012	% CHANGE	EMPLOYMENT 2019	% CHANGE	EMPLOYMENT 2045
KNE FAIRFAX ALIGNMENT					
Expo/Crenshaw (Existing)	960	-25.7	713	27.2	907
Crenshaw/Adams Station	729	-15.1	619	16.6	722
Midtown Crossing Station	875	8.7	951	20.7	1,148
Wilshire/Fairfax Station	2,908	18.0	3,431	8.9	3,736
Fairfax/3rd Station	4,611	-8.9	4,199	8.7	4,563
Fairfax/Santa Monica Station	1,764	-18.3	1,442	49.7	2,158
La Brea/Santa Monica Station	2,804	15.9	3,250	31.8	4,282
Hollywood/Highland Station	5,973	47.8	8,829	1.4	8,955
Hollywood Bowl Design Option	203	29.6	263	38.0	363
Totals	**20,827**	**13.8**	**23,697**	**13.2**	**26,834**

Source: SCAG 2020a

The KNE Fairfax Alignment has the same stations as the KNE San Vicente–Fairfax Alignment (Crenshaw/Adams, Midtown Crossing, Wilshire/Fairfax, Fairfax/3rd, Fairfax/Santa Monica, La Brea/Santa Monica, and Hollywood/Highland Stations), except it does not include the La Cienega/Beverly or the San Vicente/Santa Monica Stations. The existing population, household, and employment growth conditions in the 0.25- and 0.5-mile RSAs of each shared station are the same.

3.10.5.1.1.3 KNE LA BREA ALIGNMENT

A summary of existing population, households, and employment within 0.25 and 0.5 mile of the proposed stations for the KNE La Brea Alignment is provided in Table 3.10-16 through Table 3.10-21. Existing growth conditions for each station's RSAs are described in the following subsections.

TABLE 3.10-16. POPULATION WITHIN 0.5 MILE OF STATIONS: KNE LA BREA ALIGNMENT

ALIGNMENT/STATION	POPULATION 2010	% CHANGE	POPULATION 2020	% CHANGE	POPULATION 2021	% CHANGE	POPULATION 2045
KNE LA BREA ALIGNMENT							
Expo/Crenshaw (Existing)	8,878	0.7	8,940	-3.3	8,643	40.5	12,142
Crenshaw/Adams Station	11,698	-4.4	11,183	-2.0	10,955	60.5	17,579
Midtown Crossing Station	11,708	-5.8	11,029	-1.7	10,846	49.2	16,177
Wilshire/La Brea Station	12,263	3.6	12,709	-2.7	12,361	53.3	18,951
La Brea/Beverly Station	7,978	-8.5	7,298	0.3	7,323	34.8	9,870
La Brea/Santa Monica Station	14,130	-3.9	13,581	0.1	13,590	17.0	15,902
Hollywood/Highland Station	14,945	-0.1	14,924	-4.8	14,207	37.9	19,596
Hollywood Bowl Design Option	6,441	-1.0	6,374	-6.2	5,977	65.0	9,860
Totals[1]	**80,162**	**-2.3**	**78,287**	**-2.1**	**76,609**	**41.6**	**108,505**

Source: U.S. Census Bureau 2021; SCAG 2020a
[1] Due to overlapping station RSAs, as shown in Figure 3.10-3, the KNE La Brea Alignment corridor totals are less than the summation of all the station RSAs combined as the corridor total does not account for redundancy in data.

TABLE 3.10-17. POPULATION WITHIN 0.25 MILE OF STATIONS: KNE LA BREA ALIGNMENT

ALIGNMENT/STATION	POPULATION 2010	% CHANGE	POPULATION 2020	% CHANGE	POPULATION 2021	% CHANGE	POPULATION 2045
KNE LA BREA ALIGNMENT							
Expo/Crenshaw (Existing)	1,973	4.8	2,067	-4.6	1,972	37.1	2,704
Crenshaw/Adams Station	3,115	-7.5	2,880	-0.6	2,863	61.5	4,625
Midtown Crossing Station	2,696	-4.2	2,584	-3.2	2,501	65.3	4,133
Wilshire/La Brea Station	3,141	2.2	3,211	0.7	3,233	96.9	6,366
La Brea/Beverly Station	1,961	-8.8	1,788	1.0	1,805	68.9	3,048
La Brea/Santa Monica Station	3,476	-5.3	3,292	4.1	3,427	8.5	3,718
Hollywood/Highland Station	3,985	-2.4	3,891	-6.4	3,642	26.0	4,589
Hollywood Bowl Design Option	1,157	0.2	1,159	-5.5	1,095	83.7	2,011
Totals	**21,504**	**-2.9**	**20,872**	**-1.6**	**20,538**	**51.9**	**31,194**

Source: U.S. Census Bureau 2021; SCAG 2020a

TABLE 3.10-18. HOUSEHOLDS WITHIN 0.5 MILE OF STATIONS: KNE LA BREA ALIGNMENT

ALIGNMENT/STATION	HOUSEHOLD 2010	% CHANGE	HOUSEHOLD 2020	% CHANGE	HOUSEHOLD 2021	% CHANGE	HOUSEHOLD 2045
KNE LA BREA ALIGNMENT							
Expo/Crenshaw (Existing)	3,546	3.7	3,676	-2.3	3,593	49.0	5,354
Crenshaw/Adams Station	4,122	7.3	4,422	-1.9	4,340	63.1	7,077
Midtown Crossing Station	4,092	4.3	4,270	-4.2	4,092	46.1	5,977
Wilshire/La Brea Station	6,408	2.3	6,557	0.9	6,615	48.6	9,833
La Brea/Beverly Station	3,205	-2.8	3,114	-2.2	3,046	36.4	4,154
La Brea/Santa Monica Station	8,061	-2.4	7,867	-0.2	7,849	17.6	9,232
Hollywood/Highland Station	8,956	3.9	9,307	-3.6	8,972	26.4	11,337
Hollywood Bowl Design Option	3,685	1.6	3,744	-2.4	3,656	52.5	5,574
Totals[1]	**37,884**	**2.1**	**38,694**	**-1.7**	**38,024**	**38.0**	**52,477**

Source: U.S. Census Bureau 2021; SCAG 2020a

[1] Due to overlapping station RSAs, as shown in Figure 3.10-3, the KNE La Brea Alignment corridor totals are less than the summation of all the station RSAs combined as the corridor total does not account for redundancy in data.

TABLE 3.10-19. HOUSEHOLDS WITHIN 0.25 MILE OF STATIONS: KNE LA BREA ALIGNMENT

ALIGNMENT/STATION	HOUSEHOLD 2010	% CHANGE	HOUSEHOLD 2020	% CHANGE	HOUSEHOLD 2021	% CHANGE	HOUSEHOLD 2045
KNE LA BREA ALIGNMENT							
Expo/Crenshaw (Existing)	804	6.0	852	-3.6	821	47.7	1,213
Crenshaw/Adams Station	1,074	7.1	1,150	-1.8	1,129	67.1	1,886
Midtown Crossing Station	965	6.4	1,027	-5.0	976	60.5	1,566
Wilshire/La Brea Station	1,892	-1.7	1,860	1.0	1,879	85.7	3,489
La Brea/Beverly Station	737	-2.3	720	-2.4	703	87.6	1,319
La Brea/Santa Monica Station	1,981	2.3	2,026	2.4	2,074	11.0	2,303
Hollywood/Highland Station	2,425	3.9	2,520	-4.3	2,411	9.9	2,650
Hollywood Bowl Design Option	634	-1.7	623	-3.2	603	94.2	1,171
Totals	**10,512**	**2.5**	**10,778**	**-1.7**	**10,596**	**47.2**	**15,597**

Source: U.S. Census Bureau 2021; SCAG 2020a

TABLE 3.10-20. EMPLOYMENT WITHIN 0.5 MILE OF STATIONS: KNE LA BREA ALIGNMENT

ALIGNMENT/STATION	EMPLOYMENT 2012	% CHANGE	EMPLOYMENT 2019	% CHANGE	EMPLOYMENT 2045
KNE LA BREA ALIGNMENT					
Expo/Crenshaw (Existing)	3,463	-20.8	2,743	26.4	3,467
Crenshaw/Adams Station	2,268	-6.9	2,112	19.6	2,526
Midtown Crossing Station	3,287	-2.1	3,219	21.1	3,897
Wilshire/La Brea Station	8,229	14.4	9,417	9.4	10,298
La Brea/Beverly Station	5,658	-8.1	5,200	14.5	5,954
La Brea/Santa Monica Station	8,857	16.2	10,292	42.7	14,686
Hollywood/Highland Station	15,608	30.5	20,373	3.0	20,984
Hollywood Bowl Design Option	1,293	15.1	1,488	17.4	1,747
Totals[1]	**45,541**	**12.8**	**51,355**	**16.3**	**59,751**

Source: SCAG 2020a

[1] Due to overlapping station RSAs, as shown in Figure 3.10-3, the KNE La Brea Alignment corridor totals are less than the summation of all the station RSAs combined as the corridor total does not account for redundancy in data.

TABLE 3.10-21. EMPLOYMENT WITHIN 0.25 MILE OF STATIONS: KNE LA BREA ALIGNMENT

ALIGNMENT/STATION	EMPLOYMENT 2012	% CHANGE	EMPLOYMENT 2019	% CHANGE	EMPLOYMENT 2045
KNE LA BREA ALIGNMENT					
Expo/Crenshaw (Existing)	960	-25.7	713	27.2	907
Crenshaw/Adams Station	729	-15.1	619	16.6	722
Midtown Crossing Station	875	8.7	951	20.7	1,148
Wilshire/La Brea Station	2,774	-3.0	2,692	12.3	3,024
La Brea/Beverly Station	1,266	-3.6	1,220	14.3	1,395
La Brea/Santa Monica Station	2,821	18.8	3,352	40.2	4,698
Hollywood/Highland Station	5,973	47.8	8,829	1.4	8,955
Hollywood Bowl Design Option	203	29.6	263	38.0	363
Totals	**15,601**	**19.5**	**18,639**	**13.8**	**21,212**

Source: SCAG 2020a

Existing growth conditions for the Crenshaw/Adams, Midtown Crossing, La Brea/Santa Monica, and Hollywood/Highland Stations for the KNE La Brea Alignment are the same as the KNE San Vicente–Fairfax Alignment. The existing growth conditions for the Wilshire/La Brea and La Brea/Beverly Stations are provided below.

WILSHIRE/LA BREA STATION

The proposed Wilshire/La Brea Station is located at the intersection of two prominent commercial corridors and surrounded by neighborhoods of low- and medium-density housing. Land uses within the 0.5-mile station RSA include single- and multifamily residential, retail, offices, and other general commercial uses. A large number of residential properties within the station RSAs contribute to locally recognized historic districts. High-density residential land uses are concentrated in the multifamily neighborhoods northwest of the intersection of Wilshire Boulevard and La Brea Avenue and along the Wilshire Boulevard corridor.

Outside of a small decline in the population of the 0.5-mile RSA between 2020 and 2021 (likely associated with the COVID-19 pandemic), the population in both the 0.25- and 0.5-mile RSAs surrounding the Wilshire/La Brea Station have experienced positive (albeit small) overall growth since 2010. The population is expected to grow substantially faster, at approximately 97 percent and 53 percent in the 0.25- and 0.5-mile RSAs, respectively, between 2021 and 2045. In 2045, almost 19,000 people are expected to reside within the 0.5-mile RSA surrounding the station. However, only around 6,400 of the 19,000 will reside within 0.25 mile of the station.

The number of households is expected to increase at similar rates with almost 10,000 households in 2045 within the 0.5-mile RSA surrounding the station. About 3,500 households will reside within 0.25 mile of the station.

Employment grew about 14 percent between 2012 and 2019 in the 0.5-mile RSA but fell about three percent in the 0.25-mile RSA. However, while about nine percent employment growth is predicted for the 0.5-mile RSA from 2019 to 2045, about 12 percent growth is predicted for the 0.25-mile RSA. In 2019, the number of jobs in the 0.5-mile RSA was about 9,400, and in 2045 this number is predicted to reach nearly 10,300.

LA BREA/BEVERLY STATION

The proposed La Brea/Beverly Station is located at the intersection of two low-intensity commercial corridors and surrounded by neighborhoods of primarily low-density housing. A majority of residential properties within the station RSAs contribute to locally recognized historic districts. The potential exists for more residents in close proximity to the proposed station as parcels within the RSAs allow high-density residential builds.

Following an overall decline in population between 2010 and 2020, the population in both the 0.25- and 0.5-mile RSAs surrounding the La Brea/Beverly Station grew marginally between 2020 and 2021, contradicting the pandemic trends of nearby areas. Population is predicted to increase further from 2021 to 2045, at about 69 percent and 35 percent in the 0.25- and 0.5-mile RSAs, respectively. In 2045, almost

10,000 people are expected to reside within the 0.5-mile RSA surrounding the station. However, only around 3,000 of the 10,000 will reside within 0.25 mile of the station.

The number of households is expected to increase at similar rates with over 4,000 households in 2045 within the 0.5-mile RSA surrounding the station. About 1,300 households will reside within 0.25 mile of the station.

Employment fell about four percent and eight percent between 2012 and 2019 in the 0.25- and 0.5-mile RSAs, respectively. However, employment is expected to grow about 14 percent from 2019 to 2045 in both RSAs. In 2019, the number of jobs in the 0.5-mile RSA was 5,200, and in 2045 this number is predicted to reach nearly 6,000.

3.10.5.1.2 HOLLYWOOD BOWL DESIGN OPTION

The Hollywood Bowl Design Option RSAs are characterized largely by park and recreational land uses, as well as low-density and medium-density residential land use designations in the hills surrounding the proposed Hollywood Bowl Station. The RSAs also contain the Hollywood Bowl, a major regional activity center for entertainment and live music. Other activity centers include the Hollywood Heritage Museum to the south of the station and the Ford Theater to the northeast of the station.

Between 2010 and 2020, the population within the Hollywood Bowl Design Option RSAs remained somewhat stagnant. However, between 2020 and 2021, during the COVID-19 pandemic, the population in both the 0.25- and 0.5-mile RSAs surrounding the proposed station fell by about six percent. The population is expected to grow substantially faster, at approximately 84 percent and 65 percent in the 0.25- and 0.5-mile RSAs, respectively, between 2021 and 2045. In 2045, almost 10,000 people are expected to reside within the 0.5-mile RSA surrounding the station. However, only around 2,000 of the 10,000 will reside within the 0.25-mile RSA of the proposed station.

The number of households is expected to increase at similar rates with almost 5,600 households in 2045 within the 0.5-mile RSA surrounding the station. About 1,200 households will reside within 0.25 mile of the station.

Employment grew about 30 percent and 15 percent between 2012 and 2019 in the 0.25- and 0.5-mile RSAs, respectively. This growth in employment is expected to continue at about 38 percent and 17 percent from 2019 to 2045 in the 0.25- and 0.5-mile RSAs, respectively. In 2019, the number of jobs in the 0.5-mile RSA was about 1,500, and in 2045 this number is predicted to reach above 1,700.

3.10.5.1.3 MAINTENANCE AND STORAGE FACILITY

KNE would expand the existing Metro Division 16 yard to be capable of supporting full-service maintenance of the project equipment and vehicles. Capturing the impacts of typical walking distance was less important for the facility, relative to the proposed stations, since it would not be open to the public or pedestrians. The MSF is bounded by Arbor Vitae Street, 96th Street, Portal Avenue, and Airport Boulevard adjacent to the existing Metro Division 16 yard that services operations from the K Line. As shown in Table 3.10-22, the existing setting within 0.5 mile of the MSF includes a population of approximately 3,500, about 2,900 of whom are employed, and 1,400 households.

TABLE 3.10-22. POPULATION, HOUSEHOLDS, AND EMPLOYMENT WITHIN 0.5 MILE OF MSF

MAINTENANCE AND STORAGE FACILITY	POPULATION TOTAL	HOUSEHOLD TOTAL	EMPLOYMENT TOTAL
MSF	3,511	1,428	2,908

Source: U.S. Census Bureau 2021
MSF = Maintenance and Storage Facility

3.10.6 PROJECT MEASURES

Project measures are design features, best management practices (BMPs), or other commitments that Metro would implement as part of all proposed alignments and stations, the design option, and the MSF to reduce or avoid environmental effects associated with project construction and operation. Project measures are not the same as mitigation measures, which are used to reduce an environmental impact's significance level. Where applicable, project measures are also discussed in Section 3.10.7 as part of the evaluation of environmental impacts.

3.10.6.1 PM TRA-1: OPERATIONAL BEST MANAGEMENT PRACTICES

Operational BMPs for the alignment and stations, the design option, and the MSF 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 standards.
- Metro shall engage in first/last mile planning with local jurisdictions to improve the safety of station access for pedestrians and bicyclists. Examples of first/last mile improvements could include:
  - Signal timing for pedestrians and cyclists
  - Bike facilities and bike parking
  - Wayfinding signage to key destinations and transit connections
  - New or improved sidewalks and crosswalks
  - New or improved bus shelters and digital information signs
- Operation of the project shall not conflict with any identified local programs, plans, or policies for circulation elements in coordination with local jurisdictions.
- Stations shall be designed in accordance with the MRDC, including fire/life safety design criteria, to ensure safety and to 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 OSHA, the California Public Utilities Commission, and Metro safety and security programs and standards (i.e., MRDC, Metro Systemwide Station Design Standards Policy, and Metro Transit Service Policy).
- Any station curbside passenger pick-up/drop-off areas shall be designed according to applicable state, Metro, and city design criteria and standards.

- Driveway access to the MSF shall be designed according to applicable state, Metro, and city design criteria and standards.

3.10.6.2 PM TRA-2: CONSTRUCTION BEST MANAGEMENT PRACTICES

Construction BMPs for the alignments and stations, the design option, and the MSF shall include the following:

- Cooperation with the corridor cities and Caltrans 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 alignments and stations, the design option, and the MSF shall be maintained during construction.
- Construction activities shall comply with OSHA, California OSHA, and Metro safety and security programs.
- Safety for pedestrians, bicyclists, and motorists shall be maintained during construction using signage, partial lane closures, construction barriers, and supervision by safety and security personnel at access points and throughout construction sites.
- Metro shall prepare a Traffic Management Plan (TMP) in coordination with Caltrans, cities, and local fire and police departments prior to initiating construction activities that include the following:
  - Standard practices shall be followed that include scheduling of lane and/or road closures to minimize disruptions.
  - Detour plans shall be prepared for any streets requiring a full closure to provide safe alternate routes to vehicular traffic, pedestrians, and bicyclists during these closures.
  - Traffic control plans shall be prepared to route vehicles, bicyclists, and pedestrians around any partial closures of streets, bicycle facilities, and sidewalks.
  - Information on bus stop relocation and modification to bus routes shall be provided, as applicable. Signs shall be posted to inform transit users in advance of street closures.
  - Construction timings and street closure information shall be available to the public through media alerts, the project's website, and changeable message signs.
  - The nearest local first responders shall be notified, as appropriate, of traffic control measures in the TMP during construction to coordinate emergency response routing.
  - The delivery and pick up of construction materials during non-peak travel periods shall be scheduled to the extent possible to reduce the potential of conflicts between construction trucks and commuter traffic.
  - Coordination shall occur with other construction projects in the vicinity.
- 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 those of OSHA, California OSHA, the California Public Utilities Commission, the California Manual on Uniform

Traffic Control Devices, and Metro safety and security programs and standards (i.e., MRDC and Metro Systemwide Station Design Standards Policy). The construction TMP shall be prepared in compliance with these standards.

- Financial assistance may be provided to small businesses along the proposed alignments, the design option, and the MSF that are directly affected by construction activities through grants to cover certain fixed operating expenses such as utilities, rent or mortgage, and insurance.
- Metro shall coordinate with the Hollywood Bowl to maintain circulation and access to the Hollywood Bowl during construction of the optional Hollywood Bowl Station.

The disruptions associated with project construction, by itself and without mitigation, would hinder growth in the RSAs. Section 3.16, Transportation, describes project measures/best practices to offset these disruptions. These project measures (PM TRA-1 and PM TRA-2) are also applicable to the growth inducing impacts analysis. The operational project measures aid in accommodating growth and are consistent with applicable regulations, including the jurisdictional plans reviewed in the Regulatory Framework section. The construction project measures aid in the avoidance of growth-hindering activities such that the construction period does not disrupt activity to a degree that growth would be driven out of the areas. The analysis focuses on areas where significant impacts could occur in accordance with the CEQA significance thresholds described in the Methodology section.

3.10.7 IMPACT EVALUATION AND MITIGATION MEASURES

This analysis presents the construction and operational impacts for growth inducement, as well as any applicable mitigation measures associated with KNE. A summary of the impact conclusions and applicable mitigation measures is found in Table 3.10-23 in Section 3.10.7.6.

3.10.7.1 IMPACT GRW-1: ECONOMIC GROWTH FROM OPERATION AND MAINTENANCE

Impact GRW-1: Would operation and maintenance of the project foster unanticipated economic growth or changes that are reasonably foreseen to diminish environmental quality?

3.10.7.1.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.10.7.1.1.1 CONSTRUCTION IMPACTS

No Impact. Operations and maintenance (O&M) begins after construction is completed. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during construction.

3.10.7.1.1.2 OPERATIONAL IMPACTS

No Impact. Implementation of KNE would create jobs and earnings as a result of ongoing O&M expenditures. The expansion of transit service would represent an expansion of economic activity in the Cities of Los Angeles and West Hollywood, Los Angeles County, and the state of California and thus would generate recurring net long-term economic impacts. The increased transit employment would result in positive economic impact to the cities, the county, and the state, both through direct hiring to fill transit jobs and indirectly as these transit workers spend their earnings, creating additional consumer demand

and jobs to meet that demand. However, as these transit workers are expected to be drawn from across the region and not concentrated in the RSAs, these activities are not expected to generate significant unanticipated employment or economic growth in the RSAs.

Total additional employment would not be a significant percentage of the total employment in the RSAs, which was about 111,000 jobs in the 0.5-mile station RSA for the KNE San Vicente–Fairfax Alignment total in 2019. SCAG predicts an average 17 percent growth across the 0.5-mile station RSA for the San Vicente–Fairfax Alignment from 2019 to the 2045 forecast year. This indicates that an increase of about 18,000 jobs is anticipated within the 0.5-mile station RSA of the KNE San Vicente–Fairfax Alignment alone. Moreover, as described in project measure PM TRA-1, Metro would engage in first/last mile planning with local jurisdictions with the result that the additional travel activity associated with the planned and projected growth would not diminish environmental quality in the RSAs. Therefore, unanticipated economic growth in the RSAs is not an outcome of these activities, and negative environmental impacts associated with anticipated economic growth are addressed by project measure PM TRA-1. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during operation.

3.10.7.1.2 KNE FAIRFAX ALIGNMENT

3.10.7.1.2.1 CONSTRUCTION IMPACTS

No Impact. O&M begins after construction is completed. Therefore, the KNE Fairfax Alignment would have no impact during construction.

3.10.7.1.2.2 OPERATIONAL IMPACTS

No Impact. Implementation of KNE would create jobs and earnings as a result of ongoing O&M expenditures. The expansion of transit service would represent an expansion of economic activity in the Cities of Los Angeles and West Hollywood, Los Angeles County, and the state of California and thus would generate recurring net long-term economic impacts. The increased transit employment would result in positive economic impact to the cities, the county, and the state, both through direct hiring to fill transit jobs and indirectly as these transit workers spend their earnings, creating additional consumer demand and jobs to meet that demand. However, as these transit workers are expected to be drawn from across the region and not concentrated in the RSAs, these activities are not expected to generate significant unanticipated employment or economic growth in the RSAs.

Total additional transit employment would not be a significant percentage of the total employment in the RSAs, which was about 68,000 jobs in the 0.5-mile station RSA for the KNE Fairfax Alignment total in 2019. SCAG predicts an average 15 percent growth from 2019 to the 2045 forecast year. This indicates that an increase of about 10,500 jobs is anticipated within the 0.5-mile station RSA of the KNE Fairfax Alignment alone. Moreover, as described in project measure PM TRA-1, Metro would engage in first/last mile planning with local jurisdictions with the result that the additional travel activity associated with the planned and projected growth would not diminish environmental quality in the RSAs, especially for active travelers. Unanticipated economic growth in the RSAs is not an outcome of these activities, and impacts associated with anticipated economic growth are addressed by project measure PM TRA-1. Therefore, the KNE Fairfax Alignment would have no impact during operation.

3.10.7.1.3 KNE LA BREA ALIGNMENT

3.10.7.1.3.1 CONSTRUCTION IMPACTS

No Impact. O&M begins after construction is completed. Therefore, the KNE La Brea Alignment would have no impact during construction.

3.10.7.1.3.2 OPERATIONAL IMPACTS

No Impact. Implementation of KNE would create jobs and earnings as a result of ongoing O&M expenditures. The expansion of transit service would represent an expansion of economic activity in the Cities of Los Angeles and West Hollywood, Los Angeles County, and the state of California and thus would generate recurring net long-term economic impacts. The increased transit employment would result in positive economic impact to the cities, the county, and the state, both through direct hiring to fill transit jobs and indirectly as these transit workers spend their earnings, creating additional consumer demand and jobs to meet that demand. However, as these transit workers are expected to be drawn from across the region and not concentrated in the RSAs, these activities are not expected to generate significant unanticipated employment or economic growth in the RSAs.

Total additional transit employment would not be a significant percentage of the total employment in the RSAs, which was about 51,000 jobs in the 0.5-mile station RSA for the KNE La Brea Alignment total in 2019. SCAG predicts an average 16 percent growth from 2019 to the 2045 forecast year. This indicates that an increase of about 8,400 jobs is anticipated within the 0.5-mile station RSA of the KNE La Brea Alignment alone. Moreover, as described in project measure PM TRA-1, Metro would engage in first/last mile planning with local jurisdictions with the result that the additional travel activity associated with the planned and projected growth would not diminish environmental quality in the RSAs, especially for active travelers. Unanticipated economic growth in the RSAs is not an outcome of these activities, and impacts associated with anticipated economic growth are addressed by project measure PM TRA-1. Therefore, the KNE La Brea Alignment would have no impact during operation.

3.10.7.1.4 HOLLYWOOD BOWL DESIGN OPTION

3.10.7.1.4.1 CONSTRUCTION IMPACTS

No Impact. O&M begins after construction is completed. Therefore, the Hollywood Bowl Design Option would have no impact during construction.

3.10.7.1.4.2 OPERATIONAL IMPACTS

No Impact. Implementation of KNE would create jobs and earnings as a result of ongoing O&M expenditures. The expansion of transit service would represent an expansion of economic activity in the City of Los Angeles, Los Angeles County, and the state of California and thus would generate recurring net long-term economic impacts. The increased transit employment would result in positive economic impact to the city, the county, and the state, both through direct hiring to fill transit jobs and indirectly as these transit workers spend their earnings, creating additional consumer demand and jobs to meet that demand. However, as these transit workers are expected to be drawn from across the region and not concentrated in the RSAs, these activities are not expected to generate significant employment or economic growth in the RSAs.

Additional transit employment would not be a significant percentage of the total employment in the Hollywood Bowl Design Option RSAs, which was about 1,500 jobs in the 0.5-mile RSA in 2019. SCAG predicts 17 percent growth from 2019 to the 2045 forecast year. This indicates that an increase of about 250 jobs is anticipated within the 0.5-mile RSA alone. Moreover, as described in project measure PM TRA-1, Metro would engage in first/last mile planning with local jurisdictions with the result that the additional travel activity associated with the planned and projected growth would not diminish environmental quality in the RSAs, especially for active travelers. As a result, unanticipated economic growth in the RSAs is not an outcome of these activities, and negative environmental impacts associated with anticipated economic growth are addressed by project measure PM TRA-1. Therefore, the Hollywood Bowl Design Option would have no impact during operation.

3.10.7.1.5 MAINTENANCE AND STORAGE FACILITY

3.10.7.1.5.1 CONSTRUCTION IMPACTS

No Impact. O&M begins after construction is completed. Therefore, the MSF would have no impact during construction.

3.10.7.1.5.2 OPERATIONAL IMPACTS

No Impact. The MSF would have a limited and narrowly focused economic impact. Employment creation would be concentrated at the MSF site, with support for other employment throughout the greater metropolitan area as Metro purchases supplies and materials used at the MSF and as MSF employees spend their wages on goods and services. The magnitude of hiring and the existing presence of firms that serve MSFs associated with other Metro lines limit the potential for additional economic growth beyond the MSF site. Moreover, the concentration of employment at the MSF site is unlikely to cause negative impacts as project measure PM TRA-1 would entail Metro's engagement in first/last mile planning with the local jurisdiction to enhance safety and access in the vicinity of the MSF site. This would avoid possible impacts associated with the concentration of economic activity and underscores that the growth at the MSF site is not unanticipated. Therefore, the MSF would have no impact during operation.

3.10.7.2 IMPACT GRW-2: POPULATION GROWTH

Impact GRW-2: Would construction, operation, and maintenance of the project foster unanticipated population growth or population growth that is reasonably foreseen to diminish environmental quality?

3.10.7.2.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.10.7.2.1.1 CONSTRUCTION IMPACTS

No Impact. Population impacts for the RSAs identified for the KNE San Vicente–Fairfax Alignment would begin after the project opens for service following the construction period. Construction activity associated with the KNE San Vicente–Fairfax Alignment would draw construction workers from across the greater metropolitan area. These workers would commute to their work sites; they do not relocate to each building site as these would change throughout the construction workers' employment. As a consequence, it is unlikely that people would move from their homes in the RSAs because of the temporary construction activity. Moreover, as described in project measure PM TRA-2, a construction TMP would be prepared in coordination with all local jurisdictions affected by construction, thereby reducing the impact of construction on the KNE San Vicente–Fairfax Alignment station RSAs' access to the balance of the greater metropolitan area. Unanticipated population growth is not expected to result from construction of the alignment nor is the construction activity likely to drive the existing station RSAs' population to relocate because of the BMPs mandated by project measure PM TRA-2. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during construction.

3.10.7.2.1.2 OPERATIONAL IMPACTS

No Impact. Operation of the KNE San Vicente–Fairfax Alignment would lead to improved mobility options for those living or working within the RSAs. This is an amenity that enhances the quality of life for the resident population in the RSAs and may attract households to relocate to the RSAs over time. Travel time improvements and increased mobility options and accessibility to and from the area would make the area more desirable to residents. The growth represented by these household relocations is not unanticipated; growth and higher-density residential areas are planned for the RSAs. These are established urban areas where economic and residential development has already occurred and where future population growth is anticipated and planned for.

As KNE would be implemented over a multi-year construction period, local planning authorities would have sufficient time to prepare for an increase in population. Growth in population and households is already anticipated in the RSAs. For the 0.5-mile station RSA, SCAG predicts an average increase of about 38 percent in both population and households from 2021 to 2045. By extension, unanticipated population growth in the RSAs is not an outcome of this alignment and stations. Moreover, the expansion of population and households would increase foot traffic and circulation in the RSAs. As described in project measure PM TRA-1, Metro would engage in first/last mile planning with local jurisdictions to enhance the safety and access of pedestrians and bicyclists. As a result, there would be no unanticipated population growth and any increase in population activity in the RSAs would be addressed by project

measure PM TRA-1. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during operation.

3.10.7.2.2 KNE FAIRFAX ALIGNMENT

3.10.7.2.2.1 CONSTRUCTION IMPACTS

No Impact. Population impacts for the RSAs identified for the KNE Fairfax Alignment would begin after the project opens for service following the construction period. Construction activity associated with the KNE Fairfax Alignment would draw construction workers from across the greater metropolitan area. These workers would commute to their work sites; they would not relocate to each building site as these would change frequently over a construction worker's employment. As a consequence, it is unlikely that people would move from their homes in the RSAs because of the temporary construction activity. Moreover, as described in PM TRA-2, a construction TMP would be prepared in coordination with all local jurisdictions affected by construction, thereby reducing the impact of construction on the KNE Fairfax Alignment station RSAs' access to the balance of the greater metropolitan area. Therefore, the KNE Fairfax Alignment would have no impact during construction.

3.10.7.2.2.2 OPERATIONAL IMPACTS

No Impact. Operation of the KNE Fairfax Alignment would lead to improved mobility options for those living or working within the RSAs. This is an amenity that enhances the quality of life for the resident population in the RSAs and may attract households to relocate to the RSAs over time. Travel time improvements and increased mobility options and accessibility to and from the area would make the area more desirable to residents. The growth represented by these household relocations is not unanticipated; growth and higher-density residential areas are planned in the RSAs. These are established urban areas where economic and residential development has already occurred and where future population growth is anticipated and planned for.

For the KNE Fairfax Alignment 0.5-mile station RSA, SCAG predicts an average increase of about 37 percent in both population and households from 2021 to 2045. By extension, unanticipated population growth in the RSAs is not an outcome of this alignment and stations. Moreover, the expansion of population and households would increase foot traffic and circulation in the RSAs. As described in project measure PM TRA-1, Metro would engage in first/last mile planning with local jurisdictions to enhance the safety and access of pedestrian and bicyclists. As a result, there would be no unanticipated population growth and the impact of greater population activity in the RSAs would be addressed by project measure PM TRA-1. Therefore, the KNE Fairfax Alignment would have no impact during operations.

3.10.7.2.3 KNE LA BREA ALIGNMENT

3.10.7.2.3.1 CONSTRUCTION IMPACTS

No Impact. Population impacts for the RSAs identified for the KNE La Brea Alignment would begin after the project opens for service following the construction period. Construction activity associated with the KNE La Brea Alignment would draw construction workers from across the greater metropolitan area.

These workers would commute to their work sites; they would not relocate to each building site as these would change frequently over a construction worker's employment. As a consequence, it is unlikely that people would move from their homes in the RSAs because of the temporary construction activity. Moreover, as described in PM TRA-2, a construction TMP would be prepared in coordination with all local jurisdictions affected by construction, thereby reducing the impact of construction on the KNE La Brea Alignment station RSAs' access to the balance of the greater metropolitan area. Therefore, the KNE La Brea Alignment would have no impact during construction.

3.10.7.2.3.2 OPERATIONAL IMPACTS

No Impact. Operation of the KNE La Brea Alignment would lead to improved mobility options for those living or working within the RSAs. This is an amenity that enhances the quality of life for the resident population in the RSAs and may attract households to relocate to the RSAs over time. Travel time improvements and increased mobility options and accessibility to and from the area would make the area more desirable to residents. The growth represented by these household relocations is not unanticipated; growth and higher-density residential areas are planned in the RSAs. These are established urban areas where economic and residential development has already occurred and where future population growth is anticipated and planned for.

For the KNE La Brea Alignment 0.5-mile station RSA, SCAG predicts an average increase of about 42 percent in population and 38 percent in households from 2021 to 2045. By extension, unanticipated population growth in the RSAs is not an outcome of this alignment and stations. Moreover, the expansion of population and households would increase foot traffic and circulation in the RSAs. As described in project measure PM TRA-1, Metro would engage in first/last mile planning with local jurisdictions to enhance the safety and access of pedestrian and bicyclists. As a result, there would be no unanticipated population growth and the impact of greater population activity in the RSAs would be addressed by project measure PM TRA-1. Therefore, the KNE La Brea Alignment would have no impact during operation.

3.10.7.2.4 HOLLYWOOD BOWL DESIGN OPTION

3.10.7.2.4.1 CONSTRUCTION IMPACTS

No Impact. Population impacts for the Hollywood Bowl Design Option would begin after KNE opens for service following the construction period. Construction activity may temporarily have an employment growth-hindering effect if the disruption deters people from visiting the areas for commercial or entertainment purposes, but it is unlikely that people would move from their homes in the RSAs because of the temporary construction activity. Therefore, the Hollywood Bowl Design Option would have no impact during construction.

3.10.7.2.4.2 OPERATIONAL IMPACTS

No Impact. Operation of KNE would lead to improved mobility options for those living or working within the RSAs and increase transit ridership, thus likely reducing the occurrence of auto trips and alleviating congestion. This would generate time savings for both drivers and transit users and reduce the number of

accidents on the road network. Travel time improvements and increased mobility options and accessibility to and from the area would make the area more desirable to residents and employers. Time savings and emissions reductions are not anticipated to induce growth; however, the population may increase as a result of decreased air pollution and increased development in the area due to increased accessibility.

As KNE would be implemented over a multi-year construction period, local planning authorities would have sufficient time to prepare for an increase in population and density of economic activities. Growth in population and households is already anticipated in the RSAs. For the 0.5-mile Hollywood Bowl Design Option RSA, SCAG predicts an average increase of about 65 percent in population and 50 percent in households from 2021 to 2045. By extension, unanticipated population growth in the RSAs is not an outcome of this design option. Therefore, the Hollywood Bowl Design Option would have no impact during operation.

3.10.7.2.5 MAINTENANCE AND STORAGE FACILITY

3.10.7.2.5.1 CONSTRUCTION IMPACTS

No Impact. The MSF represents a new employment site in the greater metropolitan area. Workers would be drawn from across the greater metropolitan area and would not be anticipated to relocate near this industrial-related work site. Population impacts for the MSF would begin after KNE opens for service following the construction period. The disruption associated with construction activity may temporarily deter people from visiting the area, but it is unlikely that people would move from their homes in the RSAs because of the temporary construction activity. Moreover, as described in project measure PM TRA-2, a construction TMP would be prepared in coordination with the host local jurisdiction, reducing the potential disruption. Therefore, the MSF would have no impact during construction.

3.10.7.2.5.2 OPERATIONAL IMPACTS

No Impact. The MSF differs from station-based RSAs in that it does not generate the mobility, access, and connectivity amenities of an added Metro station. For this reason, MSF operation is not expected to increase the attractiveness of the area and generate unanticipated population growth. Because of the noise and industrial-type activity of these locations, an MSF is typically located in areas zoned for uses other than residential, further limiting the potential for unanticipated population growth in the area around the MSF. Therefore, the MSF would have no impact during operation.

3.10.7.3 IMPACT GRW-3: ECONOMIC DEVELOPMENT

Impact GRW-3: Would riders' use of the project increase the attractiveness of proposed station areas to a degree that unanticipated economic development occurs or is reasonably foreseen to diminish environmental quality?

3.10.7.3.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.10.7.3.1.1 CONSTRUCTION IMPACTS

No Impact. Construction activity may temporarily decrease the attractiveness of proposed station areas, which could deter people from visiting the areas for commercial purposes. As described in project measure PM TRA-2, a construction TMP would be prepared for all local jurisdictions affected by construction. Implementation of the TMP would make residents and businesses aware of detours and temporary closures, but would not lead to conditions that would increase the attractiveness of proposed station areas during construction compared to existing conditions. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during construction.

3.10.7.3.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. Implementation of KNE would likely increase the attractiveness of the RSAs for individuals, businesses, and developers. This in turn could foster and support opportunities for economic development, with improved accessibility and densification of land uses around transit stations acting as a catalyst for attracting commercial activities, and by extension, employment. However, as detailed in the Regulatory Framework section, plans and policies are in place to address the connection between infrastructure provisions and economic development. SCAG, for example, defines two goals that align with this transit-oriented economic development:

(1) Align the plan investments and policies with improving regional economic development and competitiveness

(2) Encourage land use and growth patterns that facilitate transit and active transportation

As a result, it is unlikely that KNE would spark unanticipated economic development in the RSAs or that the economic development would diminish environmental quality. Rather, the implementation of transit would help anchor these plans to focus future economic development around transit. Moreover, the project includes project measure PM TRA-1, a feature by which Metro would engage in first/last mile planning with local jurisdictions to enhance the safety of pedestrian and bicyclist access to the station areas, thereby supporting local goals to facilitate active transportation in areas of future development. In short, operation of the alignment and stations would not lead to unanticipated growth nor a negative impact on economic development, but rather help direct it to areas where it is desired, a beneficial outcome. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.10.7.3.2 KNE FAIRFAX ALIGNMENT

3.10.7.3.2.1 CONSTRUCTION IMPACTS

No Impact. Construction activity may temporarily decrease the attractiveness of proposed station areas, which could deter people from visiting the areas for commercial purposes. As described in project measure PM TRA-2, a construction TMP would be prepared for all local jurisdictions affected by construction. Implementation of the TMP would make residents and businesses aware of detours and

temporary closures, but would not lead to conditions that would increase the attractiveness of proposed station areas during construction compared to existing conditions. Therefore, the KNE Fairfax Alignment would have no impact during construction.

3.10.7.3.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. Implementation of KNE would likely increase the attractiveness of the RSAs for individuals, businesses, and developers. This in turn could foster and support opportunities for economic development, with improved accessibility and densification of land uses around transit stations acting as a catalyst for attracting commercial activities, and by extension, employment. However, as detailed in the Regulatory Framework section, plans and policies are in place to address the connection between infrastructure provisions and economic development. SCAG, for example, defines two goals that align with this transit-oriented economic development:

(1) Align the plan investments and policies with improving regional economic development and competitiveness

(2) Encourage land use and growth patterns that facilitate transit and active transportation

As a result, it is unlikely that KNE would spark unanticipated economic development in the RSAs or that the economic development would diminish environmental quality. Rather, the implementation of transit would help anchor these plans to focus future economic development around transit. Moreover, the project includes project measure PM TRA-1, a feature by which Metro would engage in first/last mile planning with local jurisdictions to enhance the safety of pedestrian and bicyclist access to the station areas, thereby supporting local goals to facilitate active transportation in areas of future development. In short, operation of the alignment and stations would not lead to unanticipated growth nor a negative impact on economic development, but rather help direct it to areas where it is desired, a beneficial outcome. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.10.7.3.3 KNE LA BREA ALIGNMENT

3.10.7.3.3.1 CONSTRUCTION IMPACTS

No Impact. Construction activity may temporarily decrease the attractiveness of proposed station areas, which could deter people from visiting the areas for commercial purposes. As described in project measure PM TRA-2, a construction TMP would be prepared for all local jurisdictions affected by construction. Implementation of the TMP would make residents and businesses aware of detours and temporary closures, but would not lead to conditions that would increase the attractiveness of proposed station areas during construction compared to existing conditions. Therefore, the KNE La Brea Alignment would have no impact during construction.

3.10.7.3.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. Implementation of KNE would likely increase the attractiveness of the RSAs for individuals, businesses, and developers. This in turn could foster and support opportunities for economic development, with improved accessibility and densification of land uses around transit stations acting as a catalyst for attracting commercial activities, and by extension, employment. However, as detailed in the Regulatory Framework section, plans and policies are in place to address the connection between infrastructure provisions and economic development. SCAG, for example, defines two goals that align with this transit-oriented economic development:

(1) Align the plan investments and policies with improving regional economic development and competitiveness

(2) Encourage land use and growth patterns that facilitate transit and active transportation

As a result, it is unlikely that KNE would spark unanticipated economic development in the RSAs or that the economic development would diminish environmental quality. Rather, the implementation of transit would help anchor these plans to focus future economic development around transit. Moreover, the project includes project measure PM TRA-1, a feature by which Metro would engage in first/last mile planning with local jurisdictions to enhance the safety of pedestrian and bicyclist access to the station areas, thereby supporting local goals to facilitate active transportation in areas of future development. In short, operation of the alignment and stations would not lead to unanticipated growth nor a negative impact on economic development, but rather help direct it to areas where it is desired, a beneficial outcome. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.10.7.3.4 HOLLYWOOD BOWL DESIGN OPTION

3.10.7.3.4.1 CONSTRUCTION IMPACTS

No Impact. Construction activity may temporarily decrease the attractiveness of proposed station areas, which could deter people from visiting the areas for commercial purposes. As described in project measure PM TRA-2, a construction TMP would be prepared for all local jurisdictions affected by construction. Implementation of the TMP would make residents and businesses aware of detours and temporary closures, but would not lead to conditions that would increase the attractiveness of proposed station areas during construction compared to existing conditions. Therefore, the Hollywood Bowl Design Option would have no impact during construction.

3.10.7.3.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. Implementation of the Hollywood Bowl Design Option would likely increase the attractiveness of the RSAs for individuals, businesses, and developers. This in turn could foster and support opportunities for economic development, with improved accessibility and densification of land uses around transit stations acting as a catalyst for attracting commercial activities, and by extension, employment. However, plans and policies are in place to address the connection between infrastructure

provisions and economic development. SCAG, for example, defines two goals that align with this transit-oriented economic development:

(1) Align the plan investments and policies with improving regional economic development and competitiveness

(2) Encourage land use and growth patterns that facilitate transit and active transportation

Therefore, it is unlikely that economic development in the RSAs exceeds planned capacities or is reasonably foreseen to diminish environmental quality. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.10.7.3.5 MAINTENANCE AND STORAGE FACILITY

3.10.7.3.5.1 CONSTRUCTION IMPACTS

No Impact. Due to the noise and industrial-type activity of an MSF, an MSF is typically constructed and located in areas zoned for uses other than residential, limiting the potential for disruption in the area around the MSF. Moreover, as described in project measure PM TRA-2, a construction TMP would be prepared in coordination with the applicable local jurisdictions, further reducing the potential disruption. Therefore, the MSF would have no impact during construction.

3.10.7.3.5.2 OPERATIONAL IMPACTS

No Impact. The MSF differs from station-based RSAs in that it does not generate the mobility, access, and connectivity amenities of an added Metro station. For this reason, operation of the MSF is not expected to increase the attractiveness of the area or generate unanticipated population growth. Because of the noise and industrial-type activity of an MSF, an MSF is typically located in areas zoned for uses other than residential, further limiting the potential for unanticipated population growth in the area around the MSF. Therefore, the MSF would have no impact during operation.

3.10.7.4 IMPACT GRW-4: LAND USE

Impact GRW-4: Would operation of the project lead to the transition of land uses inconsistent with planned uses within the RSAs?

3.10.7.4.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.10.7.4.1.1 CONSTRUCTION IMPACTS

No Impact. As detailed in the Regulatory Framework discussion above, plans and policies are in place to address the connection between infrastructure provisions and economic development. Using SCAG's plans as an illustration, the plans call for transit-oriented economic development and for land use and growth patterns that facilitate transit and active transportation. Construction of the KNE San Vicente–Fairfax Alignment would add a transit use in areas where the zoning and surrounding land uses are supportive. Construction of the transit facility would not convert land to an unanticipated or incompatible use. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during construction.

3.10.7.4.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of transit is essential to realizing a community's vision for clustered growth and walkable communities. Using SCAG's plans as an illustration, the plans call for transit-oriented economic development and for land use and growth patterns that facilitate transit and active transportation. The connectivity and access provided by transit operation are essential to realizing this growth pattern. Moreover, the RSAs associated with the alignment have significant unrealized growth potential. Rather than unanticipated growth, any growth generated by KNE would support the community in concentrating economic development and supportive land uses in areas where it can be efficiently served with transit.

The opportunities for economic revitalization and growth are consistent with the applicable land use plans, policies, and regulations of agencies with jurisdiction over KNE. While the project would not create any new land uses, some land uses could be converted to encourage higher-density TOD districts, but not in ways that would be inconsistent with current land use plans or incompatible with the surrounding areas. The expanded Metro network would encourage land uses that would not be as auto-dependent and not as likely to induce auto trips, which is also consistent with regional and local environmental goals, such the Sustainable Communities and Climate Protection Act of 2008 (Senate Bill 375, Chapter 728) included in the Regulatory Framework section. Future development may therefore allocate a smaller footprint to parking and allow property owners to optimize their properties for other uses. In addition, as described in project measure PM TRA-1, Metro would engage in first/last mile planning with local jurisdictions to enhance the safety of pedestrians and bicyclists in the RSAs so that access and circulation adapt to the changing land uses. Transit operations would likely induce changes in land use, but these changes are desired and have been planned for, rather than being unintended changes. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.10.7.4.2 KNE FAIRFAX ALIGNMENT

3.10.7.4.2.1 CONSTRUCTION IMPACTS

No Impact. As detailed in the Regulatory Framework discussion above, plans and policies are in place to address the connection between infrastructure provisions and economic development. Using SCAG's plans as an illustration, the plans call for transit-oriented economic development and for land use and growth patterns that facilitate transit and active transportation. Construction of the KNE Fairfax Alignment would add a transit use in areas where the zoning and surrounding land uses are supportive. Construction of the transit facility would not convert land to an unanticipated or incompatible use. Therefore, the KNE Fairfax Alignment would have no impact during construction.

3.10.7.4.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of transit is essential to realizing a community's vision for clustered growth and walkable communities. Using SCAG's plans as an illustration, the plans call for transit-oriented economic development and for land use and growth patterns that facilitate transit and active transportation. The connectivity and access provided by transit operation are essential to realizing this growth pattern. Moreover, the RSAs associated with the alignment have significant unrealized growth

potential. Rather than unanticipated growth, any growth generated by KNE would support the community in concentrating economic development and supportive land uses in areas where it can be efficiently served with transit.

The opportunities for economic revitalization and growth are consistent with the applicable land use plans, policies, and regulations of agencies with jurisdiction over KNE. While the project would not create any new land uses, some land uses could be converted to encourage higher-density TOD districts, but not in ways that would be inconsistent with current land use plans or incompatible with the surrounding areas. The expanded Metro network would encourage land uses that would not be as auto-dependent and not as likely to induce auto trips, which is also consistent with regional and local environmental goals, such the Sustainable Communities and Climate Protection Act of 2008 (Senate Bill 375, Chapter 728) included in the Regulatory Framework section. Future development may therefore allocate a smaller footprint to parking and allow property owners to optimize their properties for other uses. In addition, as described in project measure PM TRA-1, Metro would engage in first/last mile planning with local jurisdictions to enhance the safety of pedestrians and bicyclists in the RSAs so that access and circulation adapt to the changing land uses. Transit operations would likely induce changes in land use, but these changes are desired and have been planned for, rather than being unintended changes. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.10.7.4.3 KNE LA BREA ALIGNMENT

3.10.7.4.3.1 CONSTRUCTION IMPACTS

No Impact. As detailed in the Regulatory Framework discussion above, plans and policies are in place to address the connection between infrastructure provisions and economic development. Using SCAG's plans as an illustration, the plans call for transit-oriented economic development and for land use and growth patterns that facilitate transit and active transportation. Construction of the KNE La Brea Alignment would add a transit use in areas where the zoning and surrounding land uses are supportive. Construction of the transit facility would not convert land to an unanticipated or incompatible use. Therefore, the KNE La Brea Alignment would have no impact during construction.

3.10.7.4.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of transit is essential to realizing a community's vision for clustered growth and walkable communities. Using SCAG's plans as an illustration, the plans call for transit-oriented economic development and for land use and growth patterns that facilitate transit and active transportation. The connectivity and access provided by transit operation are essential to realizing this growth pattern. Moreover, the RSAs associated with the alignment have significant unrealized growth potential. Rather than unanticipated growth, any growth generated by KNE would support the community in concentrating economic development and supportive land uses in areas where it can be efficiently served with transit.

The opportunities for economic revitalization and growth are consistent with the applicable land use plans, policies, and regulations of agencies with jurisdiction over KNE. While the project would not create any new land uses, some land uses could be converted to encourage higher-density TOD districts, but not

in ways that would be inconsistent with current land use plans or incompatible with the surrounding areas. The expanded Metro network would encourage land uses that would not be as auto-dependent and not as likely to induce auto trips, which is also consistent with regional and local environmental goals, such the Sustainable Communities and Climate Protection Act of 2008 (Senate Bill 375, Chapter 728) included in the Regulatory Framework section. Future development may therefore allocate a smaller footprint to parking and allow property owners to optimize their properties for other uses. In addition, as described in project measure PM TRA-1, Metro would engage in first/last mile planning with local jurisdictions to enhance the safety of pedestrians and bicyclists in the RSAs so that access and circulation adapt to the changing land uses. Transit operations would likely induce changes in land use, but these changes are desired and have been planned for, rather than being unintended changes. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.10.7.4.4 HOLLYWOOD BOWL DESIGN OPTION

3.10.7.4.4.1 CONSTRUCTION IMPACTS

No Impact. As detailed in the Regulatory Framework discussion above, plans and policies are in place to address the connection between infrastructure provisions and economic development. Using SCAG's plans as an illustration, the plans call for transit-oriented economic development and for land use and growth patterns that facilitate transit and active transportation. Construction of the design option would add transit use in areas where the zoning and surrounding land uses are supportive. Construction of the transit facility would not convert land to an unanticipated or incompatible use. Therefore, the Hollywood Bowl Design Option would have no impact during construction.

3.10.7.4.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of transit is essential to realizing a community's vision for clustered growth and walkable communities. Using SCAG's plans as an illustration, the plans call for transit-oriented economic development and for land use and growth patterns that facilitate transit and active transportation. The connectivity and access provided by transit operation are essential to realizing this growth pattern. Moreover, the RSAs associated with the design option have significant unrealized growth potential. Rather than unanticipated growth, any growth generated by the project would support the community in concentrating economic development and supportive land uses in areas where it can be efficiently served with transit.

The opportunities for economic revitalization and growth are consistent with the applicable land use plans, policies, and regulations of agencies with jurisdiction over the RSA. While the project would not create any new land uses, some land uses could be converted to encourage higher-density TOD districts, but not in ways that would be inconsistent with current land use plans or incompatible with the surrounding areas. The expanded Metro network would encourage land uses that would not be as auto-dependent and not as likely to induce auto trips, which is also consistent with regional and local environmental goals, such the Sustainable Communities and Climate Protection Act of 2008 (Senate Bill 375, Chapter 728) included in the Regulatory Framework section. In addition, as described in PM TRA-1, Metro would engage in first/last mile planning with local jurisdictions to enhance the safety of

pedestrians and bicyclists in the RSAs so that access and circulation adapt to the changing land uses. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.10.7.4.5 MAINTENANCE AND STORAGE FACILITY

3.10.7.4.5.1 CONSTRUCTION IMPACTS

No Impact. Due to the noise and industrial-type activity of an MSF, an MSF is typically constructed and located in areas zoned for compatible uses, limiting the potential for unanticipated changes in land use. Moreover, as described in project measure PM TRA-2, a construction TMP would be prepared in coordination with the applicable local jurisdictions, further reducing the potential for unanticipated changes in land use. Therefore, the MSF would have no impact during construction.

3.10.7.4.5.2 OPERATIONAL IMPACTS

No Impact. The MSF differs from station-based RSAs in that it does not generate the mobility, access, and connectivity amenities of an added Metro station. For this reason, operation of the MSF is not expected to induce changes to land use such as that from a TOD. Because of the noise and industrial-type activity of an MSF, an MSF is typically located in areas zoned for compatible uses, further limiting the potential for unanticipated changes in land use. Therefore, the MSF would have no impact during operation.

3.10.7.5 MITIGATION MEASURES

As the impact analysis above demonstrates, construction and operation of any of the KNE alignments and stations, the design option, and the MSF would result in either no impact or a less than significant impact related to growth inducement. Therefore, no mitigation is required under CEQA.

3.10.7.6 SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

Table 3.10-23 summarizes the growth inducement impact significance conclusions and applicable mitigation measures. As indicated above, there are no significant growth inducement impacts that would require mitigation.

TABLE 3.10-23. KNE SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

IMPACT		IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES				
		KNE SAN VICENTE–FAIRFAX ALIGNMENT	KNE FAIRFAX ALIGNMENT	KNE LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MAINTENANCE AND STORAGE FACILITY
Impact GRW-1: Economic Growth from Operation and Maintenance	Impact Before Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact
Impact GRW-2: Population Growth	Impact Before Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact
Impact GRW-3: Economic Development	Impact Before Mitigation	Construction: No Impact Operation: LTS	Construction: No Impact Operation: LTS	Construction: No Impact Operation: LTS	Construction: No Impact Operation: LTS	Construction: No Impact Operation: No Impact
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: No Impact Operation: LTS	Construction: No Impact Operation: LTS	Construction: No Impact Operation: LTS	Construction: No Impact Operation: LTS	Construction: No Impact Operation: No Impact
Impact GRW-4: Land Use	Impact Before Mitigation	Construction: No Impact Operation: LTS	Construction: No Impact Operation: LTS	Construction: No Impact Operation: LTS	Construction: No Impact Operation: LTS	Construction: No Impact Operation: No Impact
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: No Impact Operation: LTS	Construction: No Impact Operation: LTS	Construction: No Impact Operation: LTS	Construction: No Impact Operation: LTS	Construction: No Impact Operation: No Impact

Source: Connect Los Angeles Partners 2024
LTS = less than significant

3.11 HAZARDS AND HAZARDOUS MATERIALS

3.11.1 INTRODUCTION

This discussion provides an evaluation of K Line Northern Extension (KNE) as it relates to hazards and hazardous materials. It includes descriptions of the federal, state, and local regulatory setting, existing conditions, and the impacts from construction and operation of the proposed alignments and stations, design option, and maintenance and storage facility (MSF), as well as mitigation measures where applicable. For more detailed information, refer to the KNE Hazards and Hazardous Materials Technical Report (Appendix 3.11-A).

3.11.2 REGULATORY FRAMEWORK

3.11.2.1 FEDERAL

The following federal laws and regulations are relevant to construction and operation of the project:

- Resource Conservation and Recovery Act (RCRA) (42 United State Code [USC] Section 6901 et seq.)
- Comprehensive Environmental Response, Compensation, and Liability Act (42 USC Section 9601 et seq.)
- Clean Air Act (42 USC Section 7401 et seq.)
- Clean Water Act – National Pollutant Discharge Elimination System (Section 402[p])
- Safe Drinking Water Act (42 USC Section 300[f] et seq.)
- Toxic Substances Control Act (15 USC Section 2601 et seq.)
- Federal Insecticide, Fungicide and Rodenticide Act (7 USC Section 136 and 40 Code of Federal Regulations [CFR] Parts 152 to 171)
- Hazardous and Solid Waste Amendments to the RCRA (42 USC Section 6901 et seq.)
- Superfund Amendments and Reauthorization Act (42 USC Section 9601 et seq.)
- Hazardous Materials Transportation Act (49 USC Section 1801-1819 and 49 CFR Parts 101, 106, 107, and 171-180)
- Occupational Safety and Health Act (29 USC Section 651 et seq.)
- Emergency Planning and Community Right to Know Act (40 CFR Parts 350-372)

3.11.2.2 STATE

Primary state agencies with jurisdiction over public health hazards and hazardous chemical materials management are the Department of Toxic Substances Control (DTSC) and the Regional Water Quality Control Boards. The U.S. Environmental Protection Agency (USEPA) authorizes the DTSC to administer RCRA in the State of California. Other state agencies involved in hazardous materials management are the Department of Industrial Relations (California Occupational Safety and Health Administration [Cal/OSHA]

implementation), Office of Emergency Services (Office of Emergency Services–California Accidental Release Prevention Implementation), California Department of Fish and Wildlife, California Air Resources Board (CARB), California Highway Patrol, California Department of Transportation, State Office of Environmental Health Hazard Assessment (Proposition 65 implementation), and the California Integrated Waste Management Board.

The following state laws and regulations are relevant to construction and operation of the project:

- California Environmental Quality Act (CEQA) (Section 21000 et seq.) and CEQA Guidelines (Section 15000 et seq.)
- California Public Resources Code Section 21151.4[1]
- Porter-Cologne Water Quality Control Act (California Water Code Section 13000 et seq.)
- Hazardous Waste Control Law (California Health and Safety Code Section 25100 et seq.)
- Hazardous Materials Release Response Plans and Inventory Law (California Health and Safety Code Section 25500 et seq.)
- California Code of Regulations Title 22, Division 4.5[2]
- Safe Drinking Water and Toxic Enforcement Act (Proposition 65)
- California Government Code Section 65962.5 (Cortese List)[3]
- California Code of Regulations Title 8
- California Accidental Release Prevention Program
- State Aeronautics Act
- Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

3.11.2.3 REGIONAL

No regional regulations are applicable to the project regarding hazards and hazardous materials.

[1] This code requires the lead agency to consult with any school district with jurisdiction over a school within 0.25 mile of the project about potential effects on the school if the project might reasonably be anticipated to emit hazardous air emissions or handle an extremely hazardous substance or a mixture containing an extremely hazardous substance.

[2] This regulation contains the Environmental Health Standards for the Management of Hazardous Waste, which includes California waste identification and classification regulations.

[3] The Cortese List is a planning document used by the state, local agencies, and developers to help comply with CEQA requirements in providing information about the location of hazardous materials release sites.

3.11.2.4 LOCAL

All Metro rail projects must be designed in accordance with the most recent Metro Rail Design Criteria (MRDC).

Los Angeles County and the City of Los Angeles and City of West Hollywood have codes, ordinances, plans, and agencies that regulate permitting, design, construction, and operational activities as they pertain to hazards and hazardous materials:

- Los Angeles County
  - County Certified Unified Program Agency
  - County Division of Environmental Health Services
  - Los Angeles County General Plan
  - Los Angeles County Airport Land Use Commission Comprehensive Land Use Plan
  - Los Angeles County Local Hazard Mitigation Plan
- City of Los Angeles
  - City of Los Angeles General Plan
  - City of Los Angeles Local Hazard Mitigation Plan
  - City of Los Angeles Methane Ordinance
- City of West Hollywood
  - City of West Hollywood General Plan
  - City of West Hollywood Hazard Mitigation Plan

3.11.3 METHODOLOGY

3.11.3.1 CEQA METHODOLOGY

The purpose of this analysis is to evaluate the project against CEQA thresholds of significance as the basis for determining the level of impacts related to hazards and hazardous materials.

A Limited Phase I Environmental Site Assessment (ESA) was conducted on the three alignments and the design option; a second Limited Phase I ESA was conducted at the MSF site (Connect Los Angeles Partners 2023a and 2023b). The purpose of these ESAs was to provide information about potential hazardous materials and properties that are identified on the Cortese list and how these sites may affect the project.

3.11.3.2 SIGNIFICANCE THRESHOLDS

In accordance with Appendix G of the 2022 CEQA Guidelines, the project would have a significant impact related to hazards and hazardous materials if it would:

- Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Impact HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
- Impact HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.
- Impact HAZ-4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would create a significant hazard to the public or the environment.
- Impact HAZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, the project would result in a safety hazard or excessive noise for people residing or working in the project area.
- Impact HAZ-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- Impact HAZ-7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

3.11.4 RESOURCE STUDY AREA

The resource study area (RSA) for the hazardous materials assessment is defined as a 0.25-mile radius around the alignments and stations, the design option, and the MSF. This RSA pertains to the assessment of direct impacts related to the use, storage, and transport of hazardous material and wastes, as well as impacts to schools.

3.11.5 EXISTING SETTING

This existing setting discussion summarizes current conditions related to hazards and hazardous materials within and near the KNE RSA.

3.11.5.1 REGIONAL SETTING

The KNE alignments, stations, and design option are located in a highly urban setting, which includes single-family neighborhoods, multifamily housing, and commercial districts. The KNE San Vicente–Fairfax Alignment has commercial development on both sides of the alignment from the south end until it crosses the I-10 highway. The alignment then travels beneath single-family neighborhoods until it reaches Venice Boulevard. Commercial development is present on both sides of San Vicente Boulevard from

Venice Boulevard until it crosses La Brea Avenue. Single-family housing is present from La Brea Avenue until the alignment crosses Cochran Avenue, then multifamily housing with scattered commercial businesses is present until the alignment is near Wilshire Boulevard where museums and commercial businesses are present. Commercial businesses are present on the west side of the alignment with multifamily housing on the east side until Colgate Avenue, after which commercial businesses are present along both sides of the alignment until it crosses La Cienega Boulevard. A shopping center is present on both sides of the alignment until San Vicente Boulevard is reached, then single-family housing is on both sides with some commercial businesses until reaching Melrose Avenue. The remainder of the alignment has commercial businesses on both sides.

The KNE Fairfax Alignment has commercial businesses on both sides from the point where the KNE San Vicente–Fairfax Alignment splits off near First Street until it rejoins the KNE Fairfax Alignment at Santa Monica Boulevard.

The KNE La Brea Alignment travels beneath single-family neighborhoods after it separates from the KNE San Vicente–Fairfax and Fairfax Alignments until it reaches La Brea Avenue. Commercial businesses are on both sides of this alignment until it crosses Santa Monica Boulevard, after which there is mixed-use commercial and multifamily housing until it rejoins the other alignments.

The Hollywood Bowl Design Option travels beneath an area of mixed-use commercial and multifamily housing with scattered single-family housing. It ends in an area of entertainment (Hollywood Bowl) and parking.

The MSF site is located in a light industrial area near Los Angeles International Airport (LAX) airport.

The following discussions describe the hazards in the region that could affect the KNE alignments and stations, the Hollywood Bowl Design Option, and the MSF.

3.11.5.1.1 HAZARDOUS SUBSTANCE AND WASTE SITES (RECOGNIZED ENVIRONMENTAL CONDITION [REC] SITES)

The Limited Phase I ESAs (Connect Los Angeles Partners 2023a, 2023b) conducted for the KNE alignments and stations, the design option, and the MSF identified numerous properties within or near each RSA with storage, disposal, transportation, or a documented release of hazardous substances or petroleum products into the subsurface and had regulatory records regarding the release. Subsurface soil, soil gas, and/or groundwater contamination may also exist in unanticipated locations because of current or historical activities. Certain businesses, including gas stations, dry cleaners, auto repair facilities, and industrial manufacturing facilities, may use, store, manage, and dispose of a variety of hazardous substances and/or petroleum products, including cleaning solvents, gasoline, diesel, and oil, as part of their business activities. Some areas may also contain fill, which is common in urban settings, and was often placed many decades ago and often contains demolition materials, industrial process waste or other materials (e.g., slag, clinkers [a stony residue from burned coal], pavement or building materials) that are or may be contaminated with substances such as petroleum products, heavy metals, or other chemicals. In some cases, soil used as fill originated from a contaminated property. Although these properties may not have a documented reported release and may not be listed in one or more regulatory databases, particularly if these businesses were present and operated prior to the 1980s, contamination may still be present.

Other sources of contamination may include ongoing leaks, drips, or similar small releases over time; illicit dumping of wastes; or movement of contaminants in the subsurface via groundwater flow or soil gas migration. In these cases, contamination may be encountered in a location that otherwise was not associated with a REC site.

Subsurface materials in the RSA include fill and alluvial sediments eroded from the south flank of the Santa Monica Mountains. Groundwater may be present within these materials as shallow as 10 feet below the ground surface across the RSA. Contaminants in the subsurface may migrate with groundwater flow, sometimes affecting properties adjacent to or beyond the property from which they originated.

The contamination encountered may pose a risk to human health and the environment. Depending on the contaminant encountered in the subsurface and its concentration, a variety of health risks may exist in connection with an exposure to them.

3.11.5.1.1.1 ALIGNMENTS AND STATIONS

KNE SAN VICENTE–FAIRFAX ALIGNMENT

There are 39 REC sites within the RSA for the KNE San Vicente–Fairfax Alignment; 17 of these sites are on the Cortese list (Connect Los Angeles Partners 2023a). These facilities are identified in Table 3.11-1, and the location of each is depicted on Figure 3.11-1 through Figure 3.11-8.

TABLE 3.11-1. REC SITES WITHIN KNE SAN VICENTE–FAIRFAX ALIGNMENT RESOURCE STUDY AREA

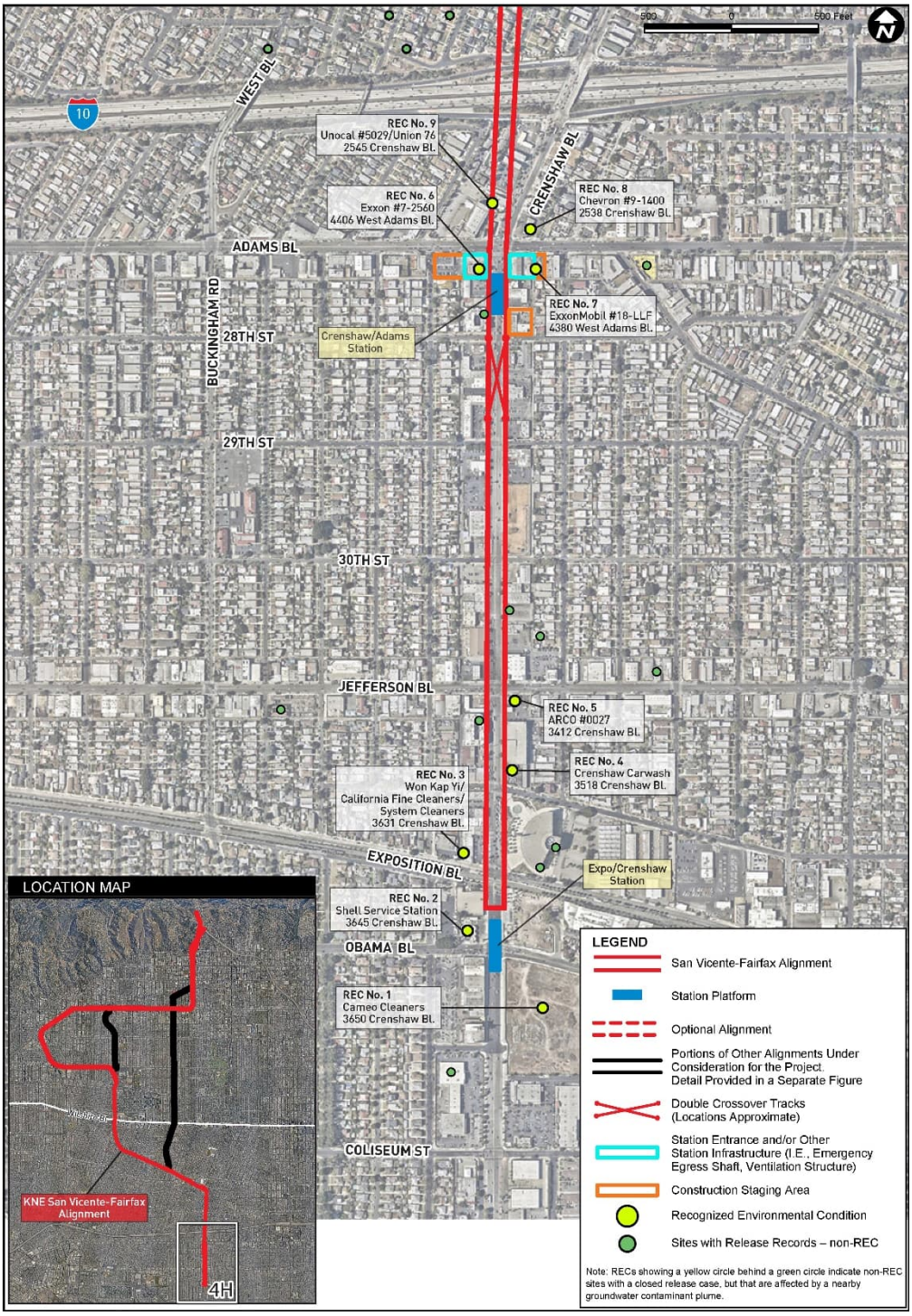
MAP ID	PARCEL #	CASE STATUS	NAME	ADDRESS
1	APN 5033-001-035	Open	Cameo Cleaners, LLC/Siskin Investment/Rocket Cleaners	3650 Crenshaw Boulevard, Los Angeles
2*	**APN 5046-022-016**	**Closed**	**Shell Service Station**	**3645 Crenshaw Boulevard, Los Angeles**
3	APN 5046-001-048	Open	Won Kap Yi/California Fine Cleaners/System Cleaners	3631 Crenshaw Boulevard, Los Angeles
4	APN 5044-004-009	Closed	Crenshaw Car Wash	3518 Crenshaw Boulevard, Los Angeles
5*	**APN 5044-004-025**	**Closed**	**ARCO #0027**	**3412 Crenshaw Boulevard, Los Angeles**
6*	**APN 5050-001-030**	**Closed**	**Exxon #7-2560**	**4406 West Adams Boulevard, Los Angeles**
7*	**APN 5051-007-001**	**Closed**	**ExxonMobil #18-LLF**	**4380 West Adams Boulevard, Los Angeles**
8*	**APN 5059-003-020**	**Closed**	**Chevron #9-1400**	**2538 Crenshaw Boulevard, Los Angeles**
9*	**APN 5059-003-020**	**Closed**	**Unocal #5029/Union 76**	**2545 Crenshaw Boulevard, Los Angeles**
55	APN 5070-013-003	No Case Exists	Midtown Cleaners	4764 Pico Boulevard, Los Angeles
11	APN 5070-013-003	No Case Exists	Plains Exploration and Production Co./Union Oil Co. of CA	4848 West Pico Boulevard, Los Angeles

MAP ID	PARCEL #	CASE STATUS	NAME	ADDRESS
28	APN 5084-032-030	Open	Splendid Cleaners	1226 South Cochran Ave, Los Angeles
29	APN 5085-012-036	Open	Former Danny's Dry Cleaning	5511-5519 San Vicente Blvd, Los Angeles
58	APN 5510-027-038	No Case Exists	1X Griffin Related Properties	6135 Wilshire Blvd, Los Angeles
50	N/A	N/A	Part of Salt Lake Oil Field	Refer to Figure 3.11-23 for a map of the boundaries of the Salt Lake Oil Field.
31*	**APN 5511-038-029**	**Open**	**Mas Auto Service**	**371 South Fairfax Ave, Los Angeles**
32	APN 4004-034-019	Open	The Grove at Farmers Market	6301 West 3rd St, Los Angeles
33*	**APN 5511-001-022**	**Closed**	**Former World Oil #64**	**7900 Beverly Blvd, Los Angeles**
60	APN 5511-013-002	No Case Exists	Cleansville USA	8430 Beverly Blvd, Los Angeles
38	APN 5514-012-027	Closed	Mobil #18-LN8 (Former 11-LN8)	8489 Beverly Blvd, Los Angeles
39*	**APN 4337-017-900**	**Closed**	**West Hollywood Sheriff Station**	**720 N San Vicente Blvd, West Hollywood**
40	APN 4337-017-903	Open	LA Metro Division 7 Bus Facility	8800 Santa Monica Blvd, West Hollywood
41	APN 4339-010-032	Closed	Santa Palm Car Wash	8787 Santa Monica Blvd, West Hollywood
42	APN 4339-007-014	Open	Former Canyon Cleaner Facility	8725 Santa Monica Blvd, West Hollywood
43	APN 5529-001-028	Closed	West Hollywood Mobil Service	8380 Santa Monica Blvd, West Hollywood
44*	**APN 5554-025-900**	**Closed**	**Chevron #9-0769T**	**8383 Santa Monica Blvd, West Hollywood**
45	APN 5554-015-031	Open	Peter's Magnolia Cleaners	8301-8307 Santa Monica Blvd, West Hollywood
46	APN 5529-019-902	Open	Crescent Shopping Center	8100-8136 Santa Monica Blvd, West Hollywood
47	APN 5529-024-001	Open	Four Seasons Dry Cleaning & Laundry	8040-8042 Santa Monica Blvd, West Hollywood
48*	**APN 5529-024-026**	**Closed**	**World Oil #65**	**8020 Santa Monica Blvd, West Hollywood**
34*	**APN 5529-014-035**	**Closed**	**76 Products Station #7261**	**7960 Santa Monica Blvd, West Hollywood**
59	APN 5530-001-018	No Case Exists	Sanfair Cleaners	7877 Santa Monica Blvd, West Hollywood
25*	**APN 5531-017-020**	**Open**	**West Hollywood Gateway Redevelopment Project**	**1005, 1023, 1033, 1037, 1043, and 1045 N La Brea Ave; 7144 and 7118 Santa Monica Blvd, West Hollywood**
35A*	**APN 5532-017-046**	**Open**	**Avon Car & Truck Rental/Onni Santa Monica, LP**	**6901 W Santa Monica Blvd, West Hollywood**
35B*	**APN 5532-017-046**	**Closed**	**Professional Tire & Auto**	**6921 W Santa Monica Blvd, West Hollywood**

MAP ID	PARCEL #	CASE STATUS	NAME	ADDRESS
36*	**APN 5532-006-039**	**Closed**	**Massachi-Chevron**	**1255 N Highland Ave, Los Angeles**
37	APN 5547-033-400	Closed	Asset Management (Retail Strip Mall)	1300-1314 N Highland Ave, Los Angeles
26*	**APN 5548-015-036**	**Closed**	**Chevron #9-9377**	**1459 Highland Ave, Los Angeles**
57	APN 5548-004-069	No Case Exists	Chevron	1787 N Highland Ave, Los Angeles
27	APN 5575-024-017	Closed	Hollywood Hills Cleaners	1900 N Highland Ave, Los Angeles

Source: Connect Los Angeles Partners 2023a
* Sites with an asterisk (*) and shown in **bold** are on the Cortese list.
Note: Map ID numbers refer to Figure 3.11-1 through Figure 3.11-8 and may not be consecutive or in numerical order.
N/A = not applicable

FIGURE 3.11-1. REC SITES WITHIN KNE SAN VICENTE–FAIRFAX ALIGNMENT RESOURCE STUDY AREA (PAGE 1 OF 8)

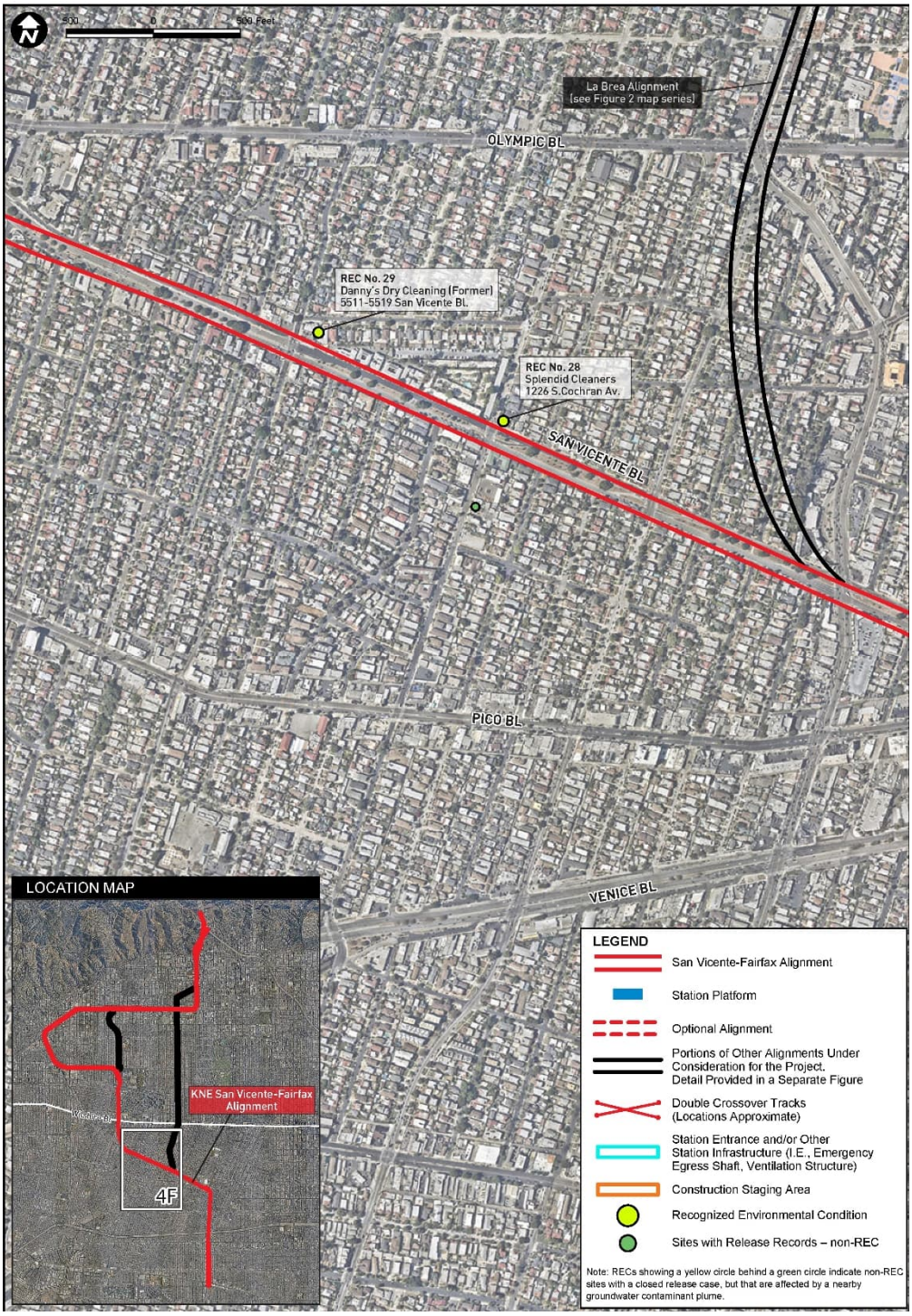


Source: Connect Los Angeles Partners 2023a

FIGURE 3.11-2. REC SITES WITHIN KNE SAN VICENTE–FAIRFAX ALIGNMENT RESOURCE STUDY AREA (PAGE 2 OF 8)

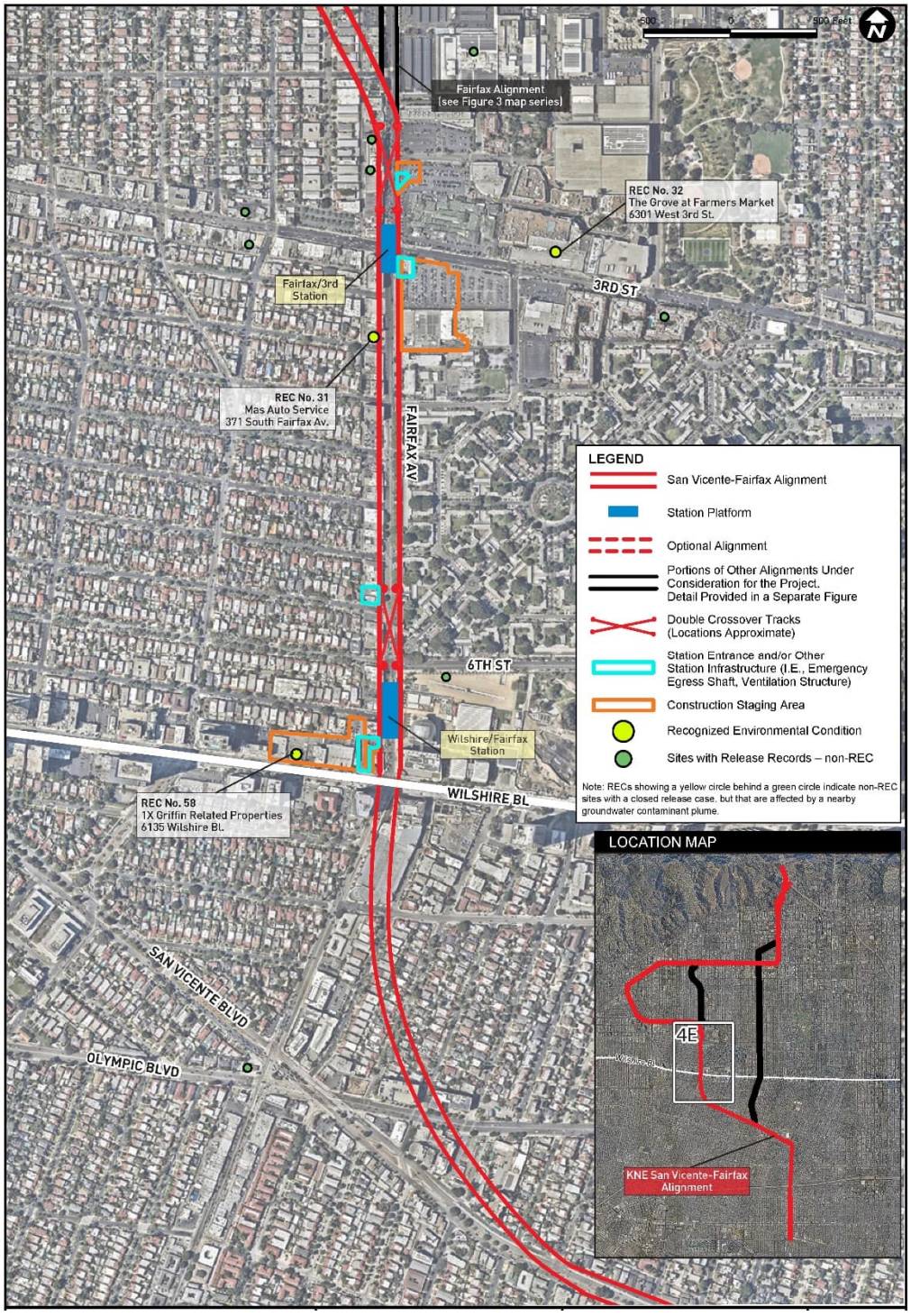
Source: Connect Los Angeles Partners 2023a

FIGURE 3.11-3. REC SITES WITHIN KNE SAN VICENTE–FAIRFAX ALIGNMENT RESOURCE STUDY AREA (PAGE 3 OF 8)



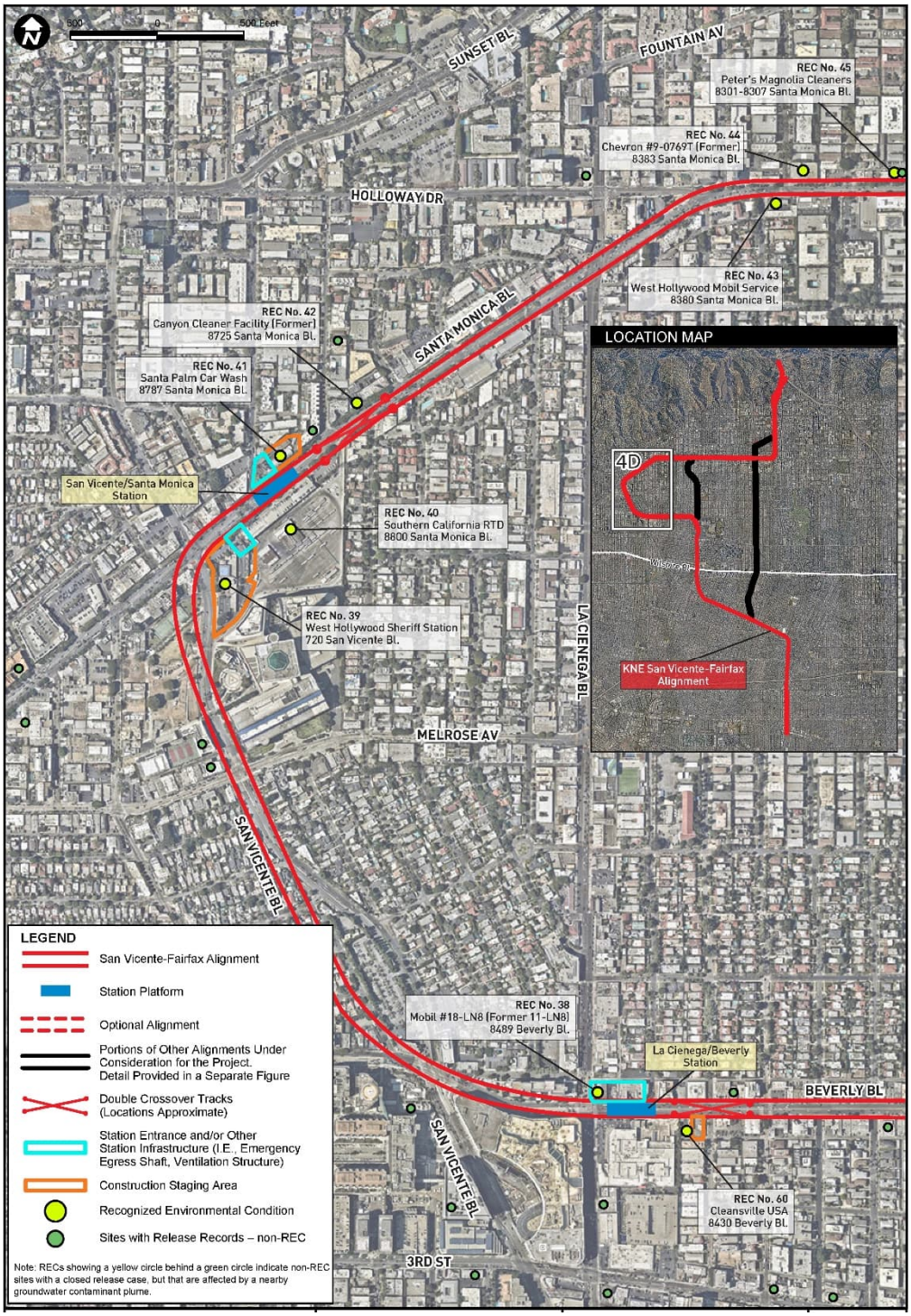
Source: Connect Los Angeles Partners 2023a

FIGURE 3.11-4. REC SITES WITHIN KNE SAN VICENTE–FAIRFAX ALIGNMENT RESOURCE STUDY AREA (PAGE 4 OF 8)



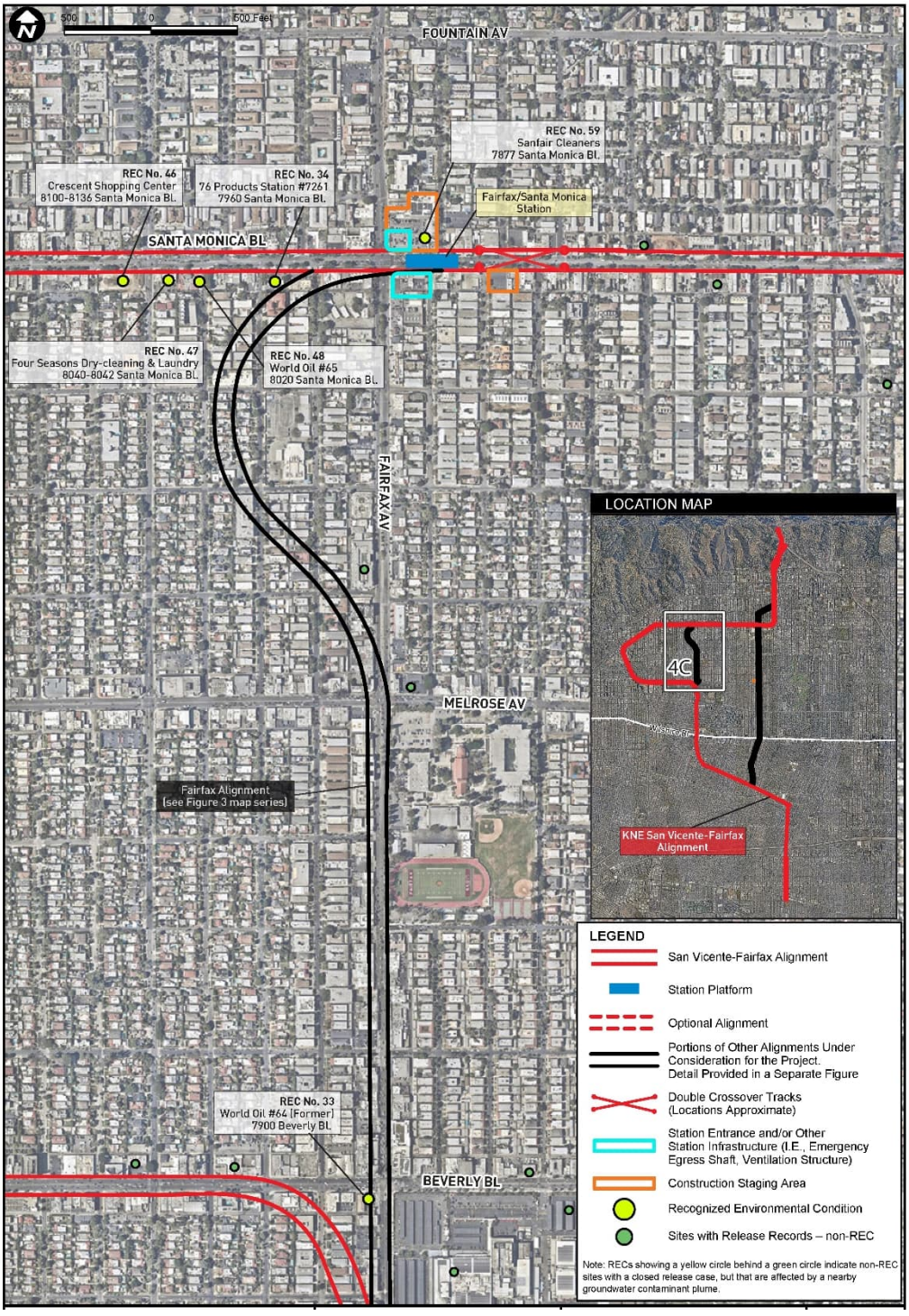
Source: Connect Los Angeles Partners 2023a

FIGURE 3.11-5. REC SITES WITHIN KNE SAN VICENTE–FAIRFAX ALIGNMENT RESOURCE STUDY AREA (PAGE 5 OF 8)



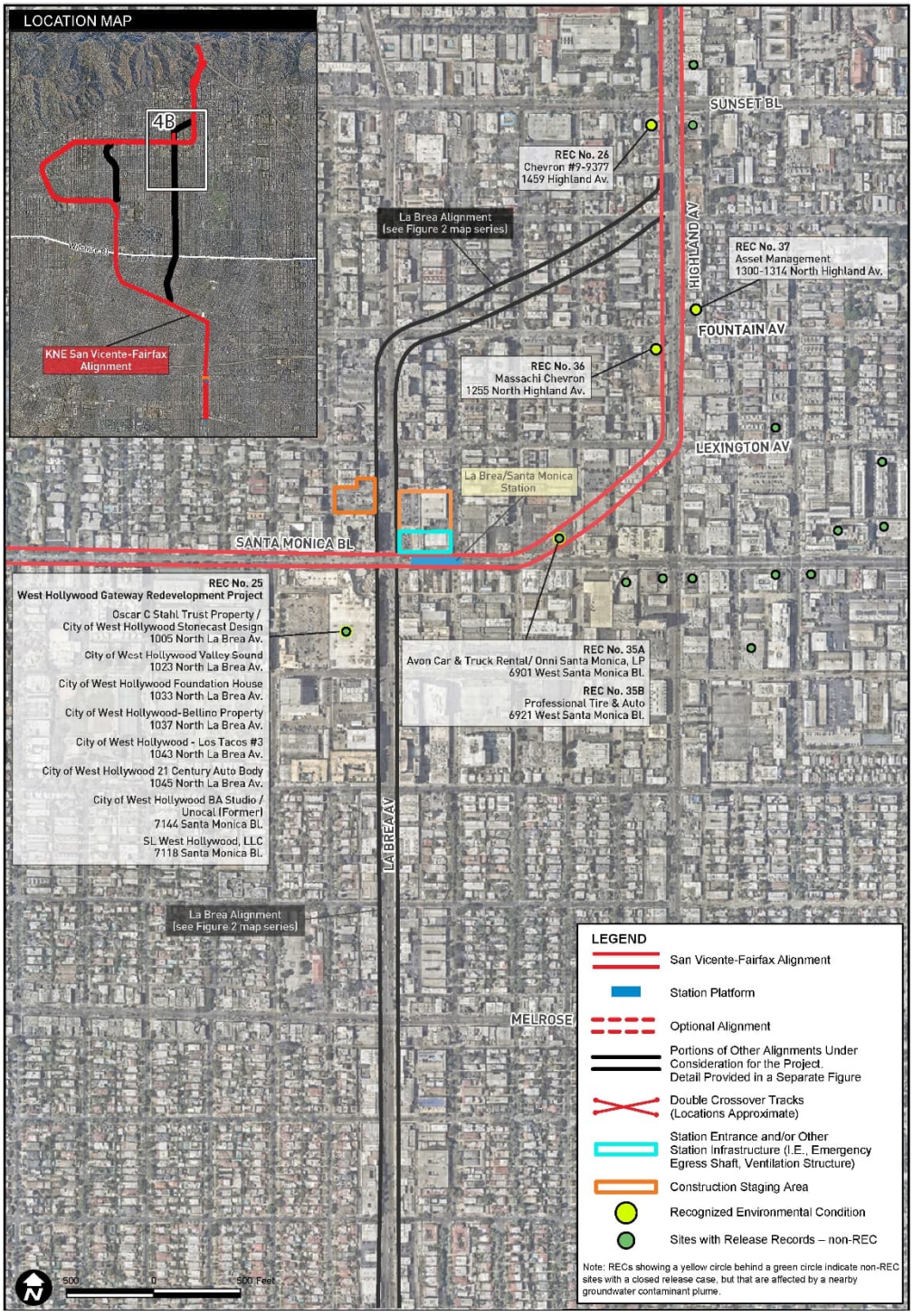
Source: Connect Los Angeles Partners 2023a

FIGURE 3.11-6. REC SITES WITHIN KNE SAN VICENTE–FAIRFAX ALIGNMENT RESOURCE STUDY AREA (PAGE 6 OF 8)



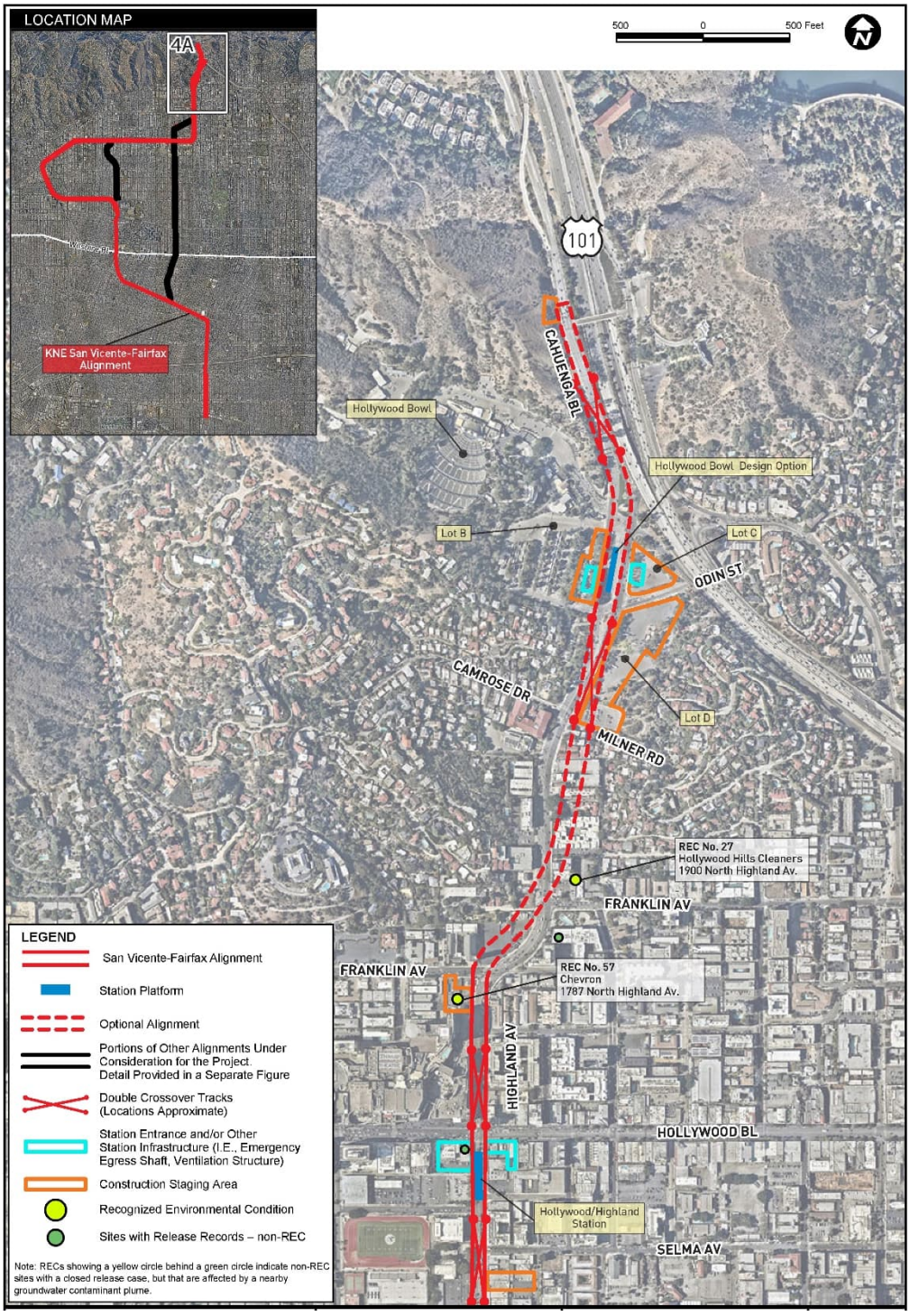
Source: Connect Los Angeles Partners 2023a

FIGURE 3.11-7. REC SITES WITHIN KNE SAN VICENTE–FAIRFAX ALIGNMENT RESOURCE STUDY AREA (PAGE 7 OF 8)



Source: Connect Los Angeles Partners 2023a

FIGURE 3.11-8. REC SITES WITHIN KNE SAN VICENTE–FAIRFAX ALIGNMENT RESOURCE STUDY AREA (PAGE 8 OF 8)



Source: Connect Los Angeles Partners 2023a

KNE FAIRFAX ALIGNMENT

There are 28 REC sites within the RSA for the KNE Fairfax Alignment; 15 of these sites are on the Cortese list (Connect Los Angeles Partners 2023a). These facilities are identified in Table 3.11-2 and the location of each is depicted on Figure 3.11-9 through Figure 3.11-15.

TABLE 3.11-2. REC SITES WITHIN KNE FAIRFAX ALIGNMENT RESOURCE STUDY AREA

MAP ID	PARCEL #	CASE STATUS	NAME	ADDRESS
1	APN 5046-022-016	Open	Cameo Cleaners, LLC/Siskin Investment/Rocket Cleaners	3650 Crenshaw Blvd, Los Angeles
2*	**APN 5046-001-048**	**Closed**	**Shell Service Station**	**3645 Crenshaw Blvd, Los Angeles**
3	APN 5044-004-009	Open	Won Kap Yi/California Fine Cleaners/System Cleaners	3631 Crenshaw Blvd, Los Angeles
4	APN 5044-004-025	Closed	Crenshaw Car Wash	3518 Crenshaw Blvd, Los Angeles
5*	**APN 5050-001-030**	**Closed**	**ARCO #0027**	**3412 Crenshaw Blvd, Los Angeles**
6*	**APN 5051-007-001**	**Closed**	**Exxon #7-2560**	**4406 W Adams Blvd, Los Angeles**
7*	**APN 5059-003-020**	**Closed**	**ExxonMobil #18-LLF**	**4380 W Adams Blvd, Los Angeles**
8*	**APN 5059-003-020**	**Closed**	**Chevron #9-1400**	**2538 Crenshaw Blvd, Los Angeles**
9*	**APN 5070-013-003**	**Closed**	**Unocal #5029/Union 76**	**2545 Crenshaw Blvd, Los Angeles**
55	APN 5070-013-003	No Case Exists	Midtown Cleaners	4764 Pico Blvd, Los Angeles
11	APN 5084-032-030	No Case Exists	Plains Exploration and Production Co./Union Oil Co. of CA	4848 W Pico Blvd, Los Angeles
28	APN 5085-012-036	Open	Splendid Cleaners	1226 S Cochran Ave, Los Angeles
29	APN 5510-027-038	Open	Former Danny's Dry Cleaning	5511-5519 San Vicente Blvd, Los Angeles
58	APN 5511-038-029	No Case Exists	1X Griffin Related Properties	6135 Wilshire Blvd, Los Angeles
50	N/A	N/A	Part of Salt Lake Oil Field	Refer to Figure 3.11-24 for a map of the boundaries of the Salt Lake Oil Field
31*	**APN 4004-034-019**	**Open**	**Mas Auto Service**	**371 S Fairfax Ave, Los Angeles**
32	APN 5511-001-022	Open	The Grove at Farmers Market	6301 W 3rd Street, Los Angeles
33*	**APN 5046-022-016**	**Closed**	**Former World Oil #64**	**7900 Beverly Blvd, Los Angeles**
34*	**APN 5529-014-035**	**Closed**	**76 Products Station #7261**	**7960 Santa Monica Blvd, West Hollywood**
59	APN 5530-001-018	No Case Exists	Sanfair Cleaners	7877 Santa Monica Blvd, West Hollywood
25*	**APN 5531-017-020**	**Open**	**West Hollywood Gateway Redevelopment Project**	**1005, 1023, 1033, 1037, 1043, and 1045 N La Brea Ave; 7144 and 7118 Santa Monica Blvd, West Hollywood**

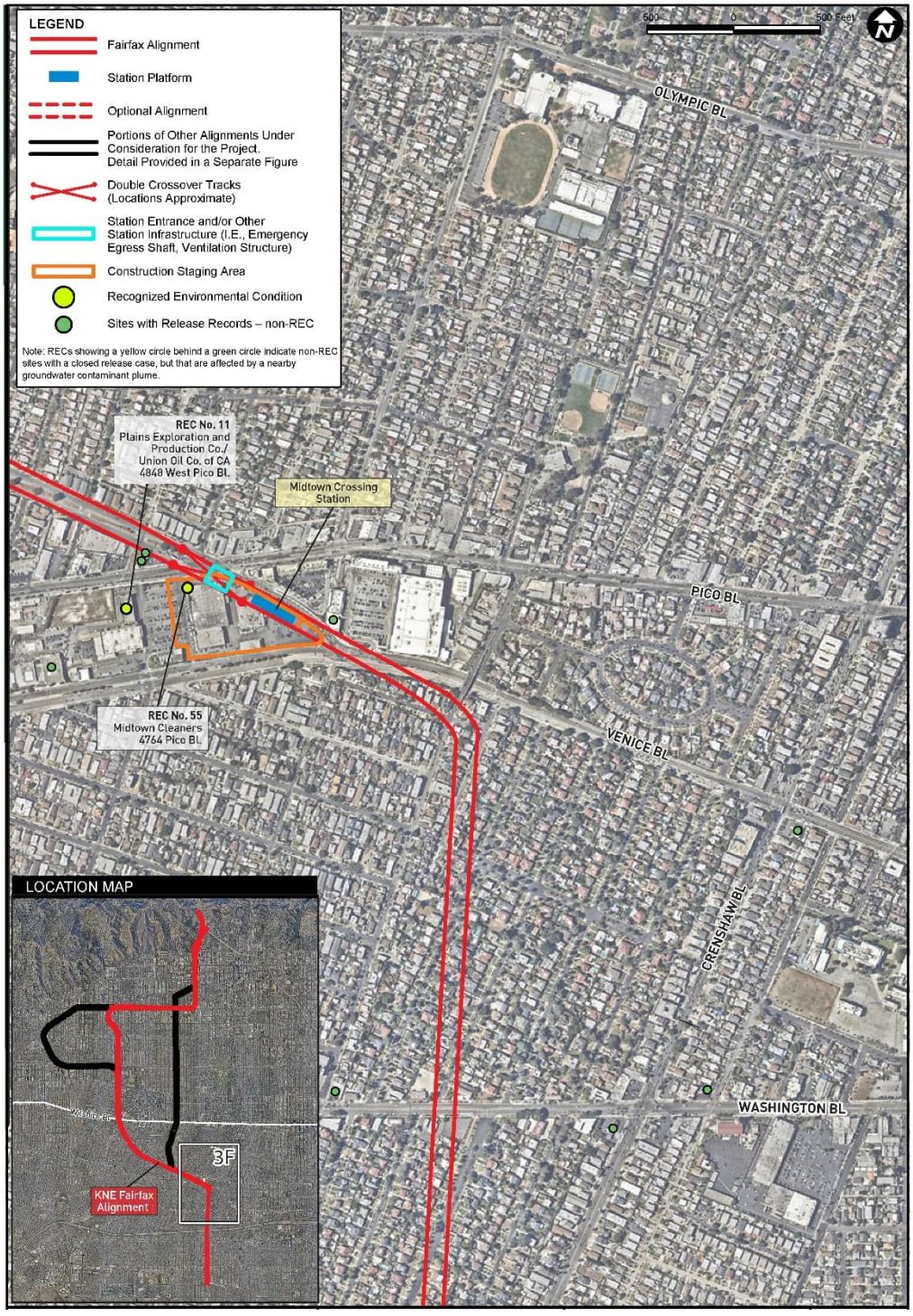
MAP ID	PARCEL #	CASE STATUS	NAME	ADDRESS
35A*	**APN 5532-017-046**	**Open**	**Avon Car & Truck Rental/Onni Santa Monica, LP**	**6901 W Santa Monica Blvd, West Hollywood**
35B*	**APN 5532-017-046**	**Closed**	**Professional Tire & Auto**	**6921 W Santa Monica Blvd, West Hollywood**
36*	**APN 5532-006-039**	**Closed**	**Massachi-Chevron**	**1255 N Highland Ave, Los Angeles**
37*	**APN 5547-033-400**	**Closed**	**Asset Management (Retail Strip Mall)**	**1300-1314 N Highland Ave, Los Angeles**
26*	**APN 5548-015-036**	**Closed**	**Chevron #9-9377**	**1459 Highland Ave, Los Angeles**
57	APN 5548-004-069	No Case Exists	Chevron	1787 N Highland Ave, Los Angeles
27	APN 5575-024-017	Closed	Hollywood Hills Cleaners	1900 N Highland Ave, Los Angeles

Source: Connect Los Angeles Partners 2023a
* Sites with an asterisk (*) and shown in **bold** are on the Cortese list.
Note: Map ID numbers refer to Figure 3.11-9 through Figure 3.11-15 and may not be consecutive or in numerical order.
N/A = not applicable

FIGURE 3.11-9. REC SITES WITHIN KNE FAIRFAX ALIGNMENT RESOURCE STUDY AREA (PAGE 1 OF 7)

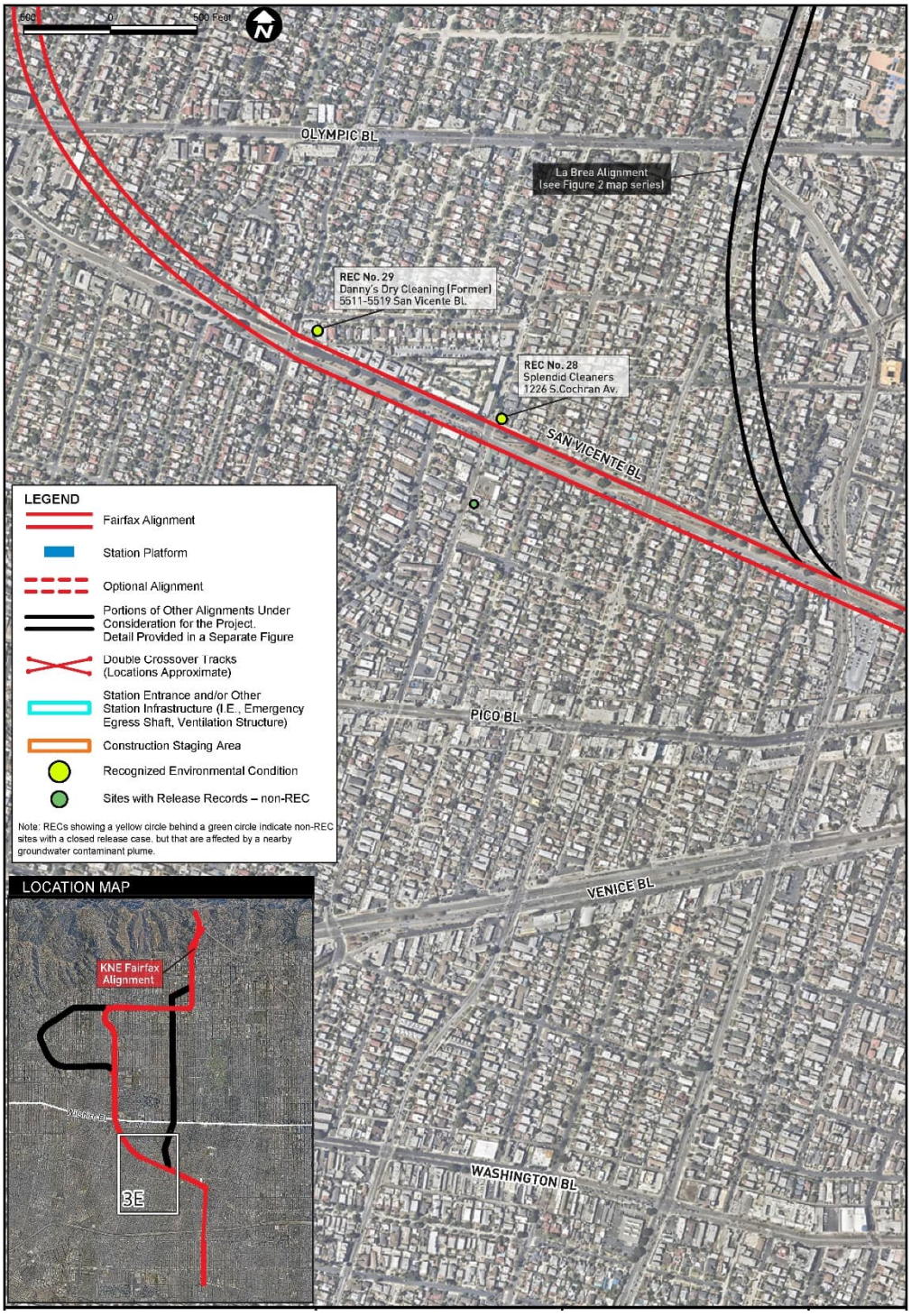
Source: Connect Los Angeles Partners 2023a

FIGURE 3.11-10. REC SITES WITHIN KNE FAIRFAX ALIGNMENT RESOURCE STUDY AREA (PAGE 2 OF 7)



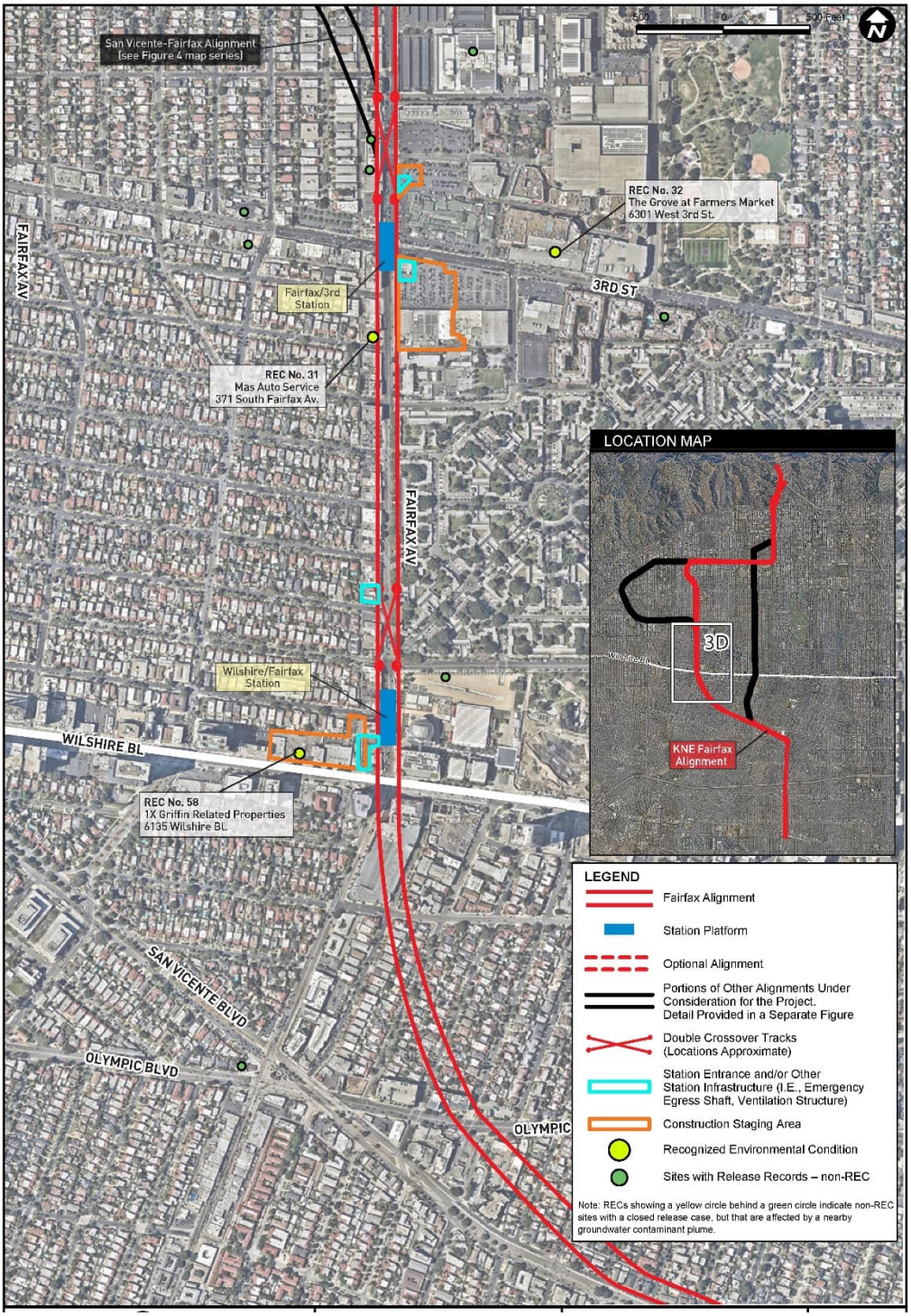
Source: Connect Los Angeles Partners 2023a

FIGURE 3.11-11. REC SITES WITHIN KNE FAIRFAX ALIGNMENT RESOURCE STUDY AREA (PAGE 3 OF 7)



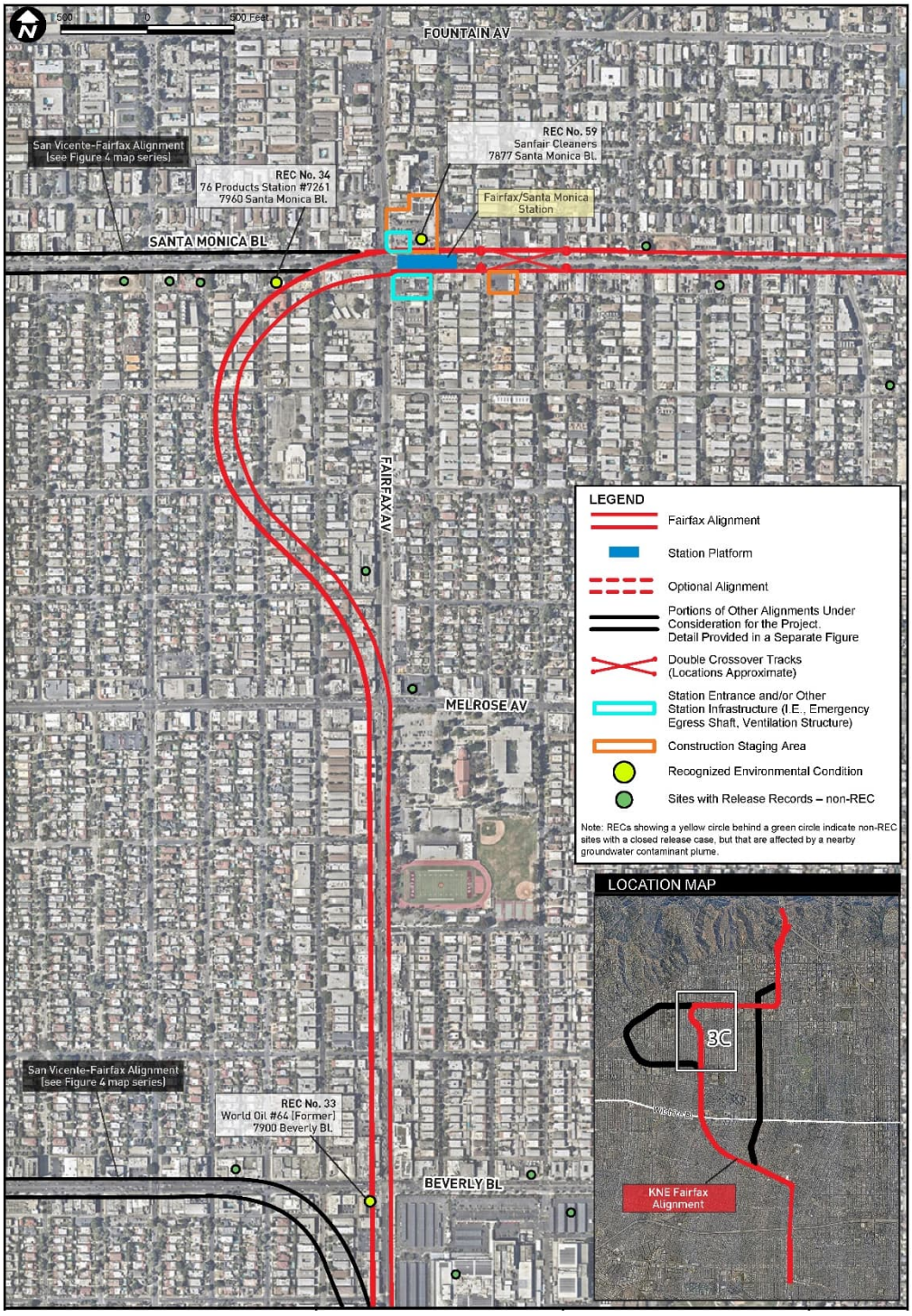
Source: Connect Los Angeles Partners 2023a

FIGURE 3.11-12. REC SITES WITHIN KNE FAIRFAX ALIGNMENT RESOURCE STUDY AREA (PAGE 4 OF 7)



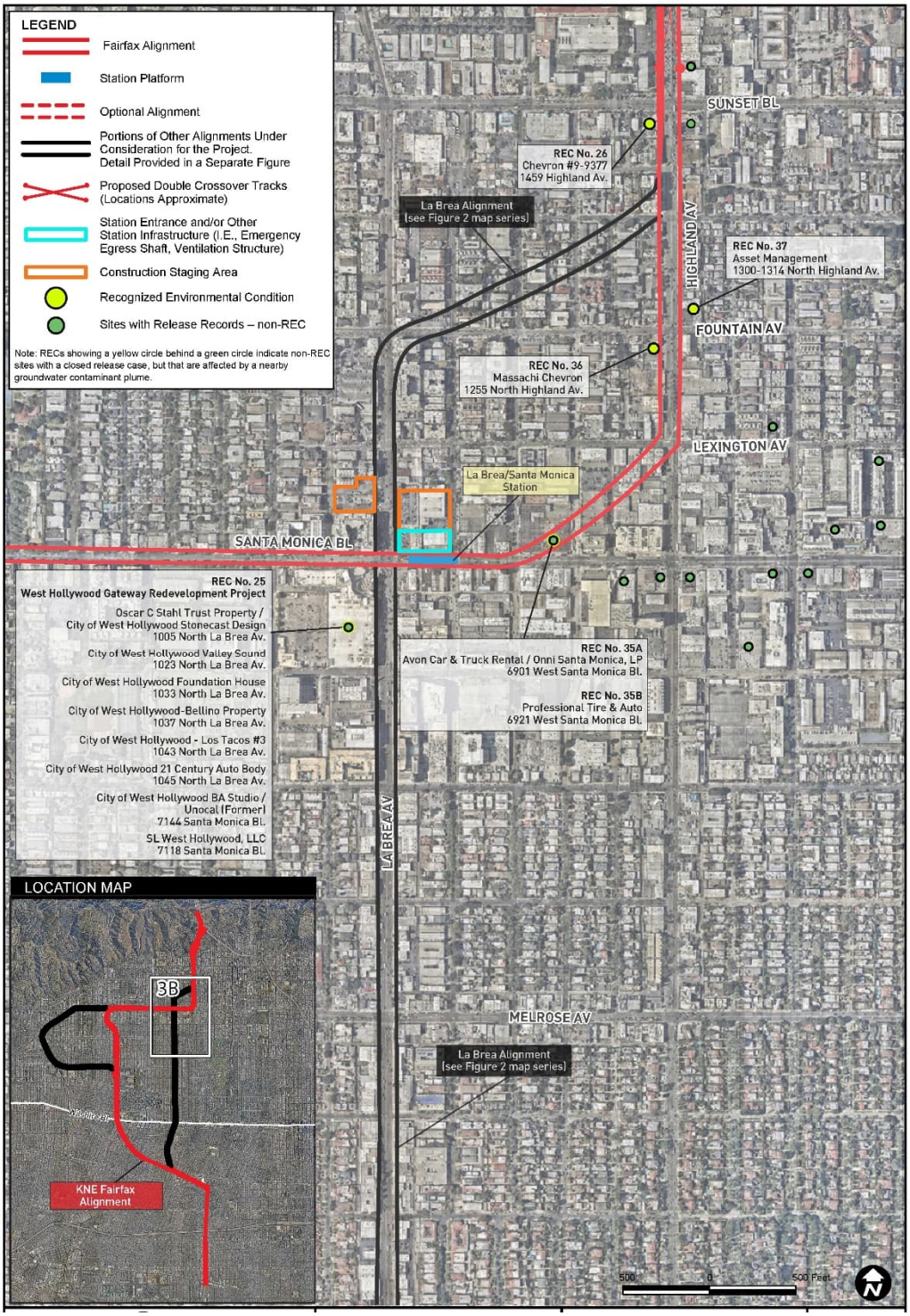
Source: Connect Los Angeles Partners 2023a

FIGURE 3.11-13. REC SITES WITHIN KNE FAIRFAX ALIGNMENT RESOURCE STUDY AREA (PAGE 5 OF 7)



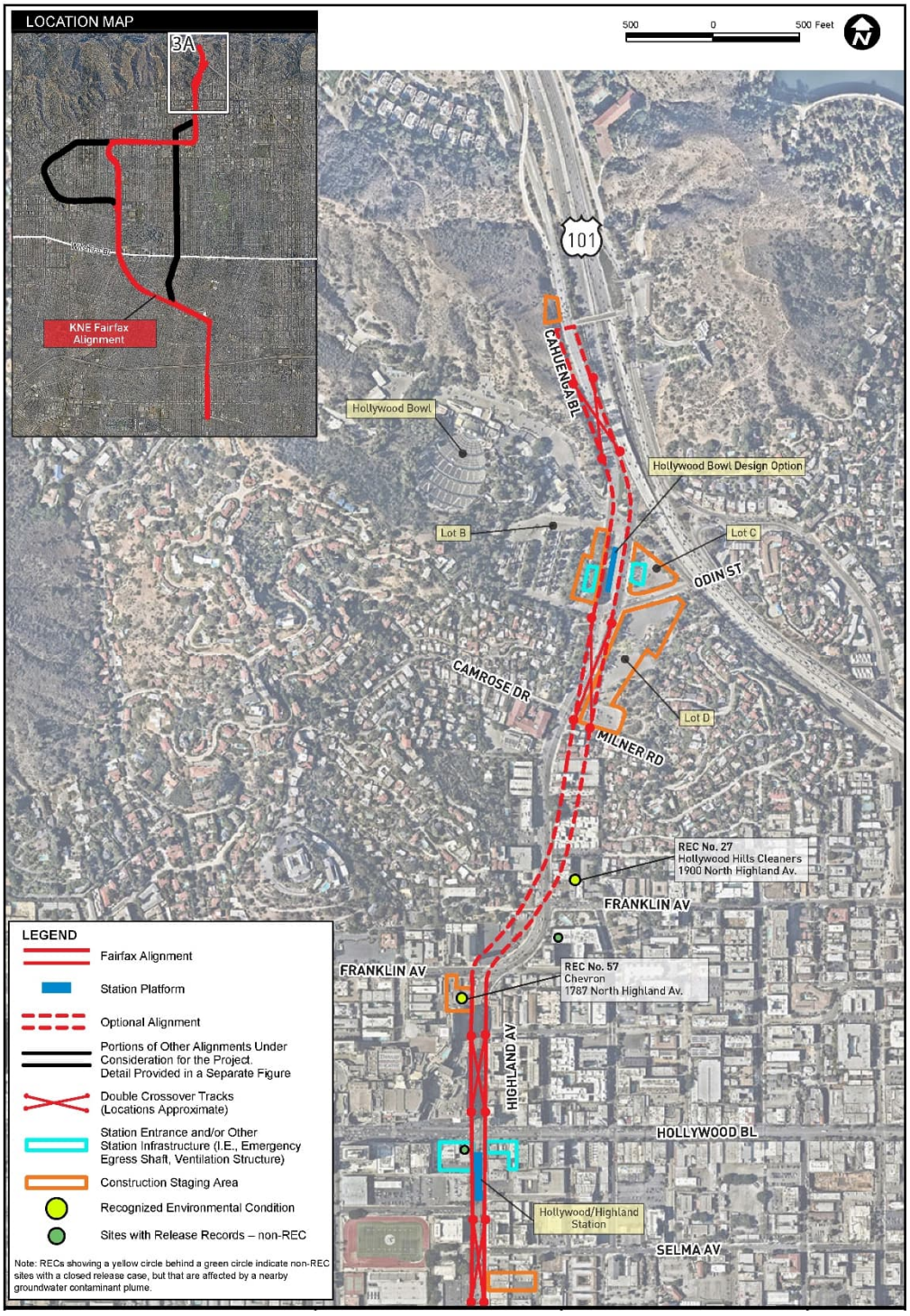
Source: Connect Los Angeles Partners 2023a

FIGURE 3.11-14. REC SITES WITHIN KNE FAIRFAX ALIGNMENT RESOURCE STUDY AREA (PAGE 6 OF 7)



Source: Connect Los Angeles Partners 2023a

FIGURE 3.11-15. REC SITES WITHIN KNE FAIRFAX ALIGNMENT RESOURCE STUDY AREA (PAGE 7 OF 7)



Source: Connect Los Angeles Partners 2023a

KNE LA BREA ALIGNMENT

There are 31 REC sites within the RSA for the KNE Le Brea Alignment; 17 of these sites are on the Cortese list (Connect Los Angeles Partners 2023a). These facilities are identified in Table 3.11-3 and the location of each is depicted on Figure 3.11-16 through Figure 3.11-21.

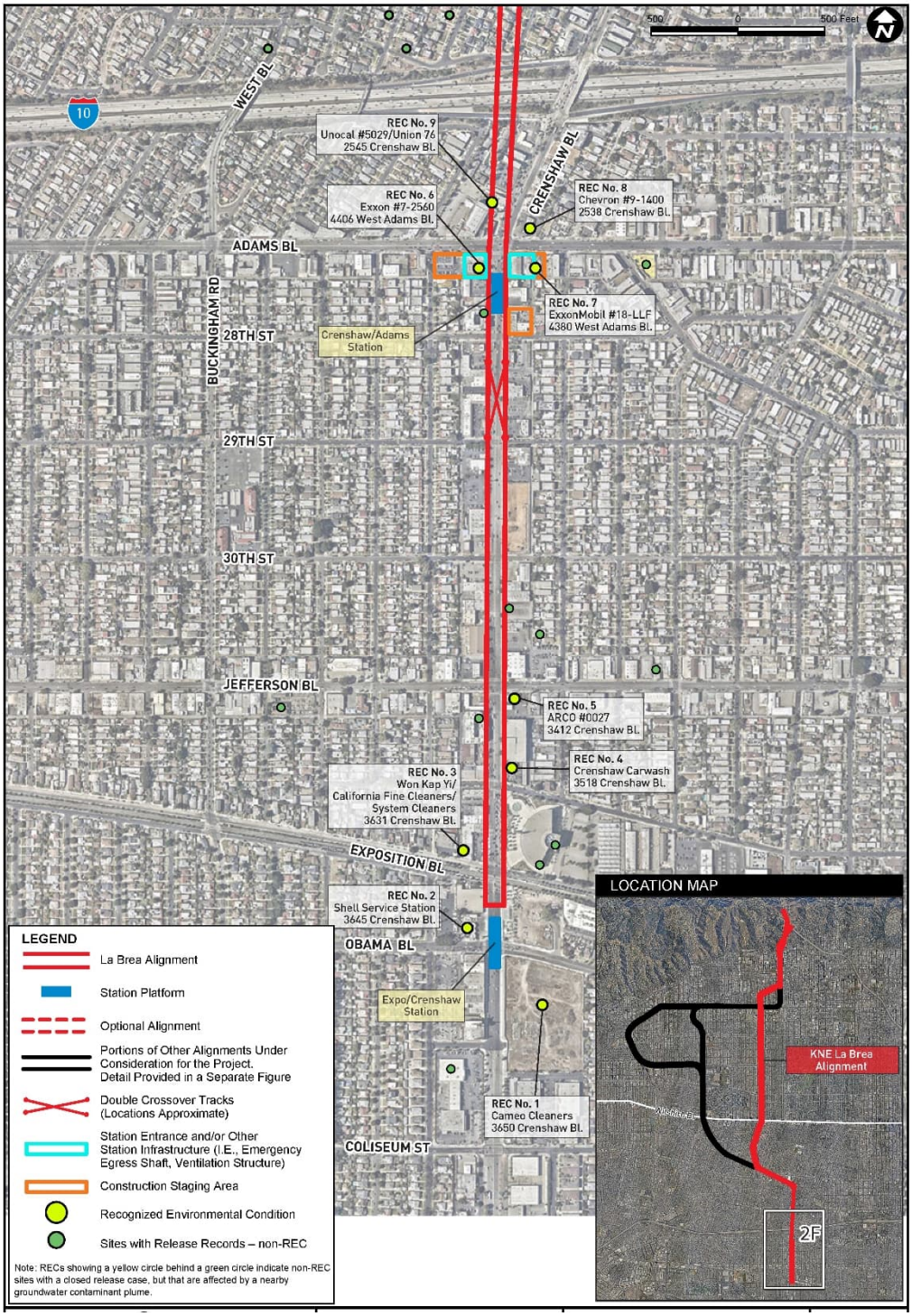
TABLE 3.11-3. REC SITES WITHIN KNE LA BREA ALIGNMENT RESOURCE STUDY AREA

MAP ID	PARCEL #	CASE STATUS	NAME	ADDRESS
1	APN 5033-001-035	Open	Cameo Cleaners, LLC/Siskin Investment/ Rocket Cleaners	3650 Crenshaw Blvd, Los Angeles
2*	**APN 5046-022-016**	**Closed**	**Shell Service Station**	**3645 Crenshaw Blvd, Los Angeles**
3	APN 5046-001-048	Open	Won Kap Yi/California Fine Cleaners/ System Cleaners	3631 Crenshaw Blvd, Los Angeles
4	APN 5044-004-009	Closed	Crenshaw Car Wash	3518 Crenshaw Blvd, Los Angeles
5*	**APN 5044-004-025**	**Closed**	**ARCO #0027**	**3412 Crenshaw Blvd, Los Angeles**
6*	**APN 5050-001-030**	**Closed**	**Exxon #7-2560**	**4406 W Adams Blvd, Los Angeles**
7*	**APN 5051-007-001**	**Closed**	**ExxonMobil #18-LLF**	**4380 W Adams Blvd, Los Angeles**
8*	**APN 5059-003-020**	**Closed**	**Chevron #9-1400**	**2538 Crenshaw Blvd, Los Angeles**
9*	**APN 5059-003-020**	**Closed**	**Unocal #5029/Union 76**	**2545 Crenshaw Blvd, Los Angeles**
55	APN 5070-013-003	No Case Exists	Midtown Cleaners	4764 Pico Blvd, Los Angeles
11	APN 5070-013-003	No Case Exists	Plains Exploration and Production Co./Union Oil Co. of CA	4848 W Pico Blvd, Los Angeles
12	APN 5084-015-036	Closed	Harry's Auto Body, Inc. dba Harry's Auto Collision Center/Subterranean Parking	1023-1027 S Redondo Blvd, Los Angeles
13*	**APN 5089-023-022**	**Closed**	**Unocal #1074**	**5301 W Olympic Blvd, Los Angeles**
14*	**APN 5508-007-014**	**Closed**	**Tosco S.S. #1116/76 Station #251116**	**5436 W 6th St, Los Angeles**
15*	**N/A**	**Closed**	**Regional Chlorinated VOC Groundwater Contaminant Plume**	**S La Brea Ave, Los Angeles**
16	APN 5513-019-039	Open	Former Continental Graphics Facility Building G	171-181 S La Brea Ave, Los Angeles
17	APN 5513-002-001 APN 5513-019-043	Open	Former Continental Graphics Facility Lot H, Buildings A and B	101 N and 101 S La Brea Ave, Los Angeles
18*	**APN 5513-003-002**	**Open**	**Chevron #9-0726**	**7020 Beverly Blvd, Los Angeles**
19*	**APN 5525-032-028**	**Closed**	**Former Texaco Station**	**300 N La Brea Ave, Los Angeles**
20*	**APN 5525-033-033**	**Closed**	**Former Exxon #7-7221**	**307 N La Brea Ave, Los Angeles**
56	APN 5525-033-001	No Case Exists	Hertz Rent-A-Car	361 N La Brea Ave, Los Angeles
21*	**APN 5525-016-007**	**Closed**	**Chevron #9-0638**	**7100 W Melrose Ave, Los Angeles**
22*	**APN 5525-005-037**	**Closed**	**Former Liberty Car & Truck Rental**	**800 N La Brea Ave, Los Angeles**

MAP ID	PARCEL #	CASE STATUS	NAME	ADDRESS
23A	APN 5531-016-023	Closed	La Brea Gateway Apartments/KCOP Production Studio (Former)	915 N La Brea Ave, Los Angeles
23B	APN 5531-015-014	Open	Mole-Richardson Company	901-953 N Sycamore Ave, Los Angeles
25*	**APN 5531-017-020**	**Open**	**West Hollywood Gateway Redevelopment Project**	**1005, 1023, 1033, 1037, 1043, and 104 La Brea Ave; 7144 and 7118 Santa Monica Blvd, West Hollywood**
24*	**APN 5531-013-001**	**Closed**	**Gerster/Rolph Brake & Wheel**	**1154 N La Brea Ave, West Hollywood**
26*	**APN 5548-015-036**	**Closed**	**Chevron #9-9377**	**1459 Highland Ave, Los Angeles**
50	N/A	N/A	Part of Salt Lake Oil Field	Refer to Figure 3.11-25 for a map of the boundaries of the Salt Lake Oil Field
57	APN 5548-004-069	No Case Exists	Chevron	1787 N Highland Ave, Los Angeles
27	APN 5575-024-017	Closed	Hollywood Hills Cleaners	1900 N Highland Ave, Los Angeles

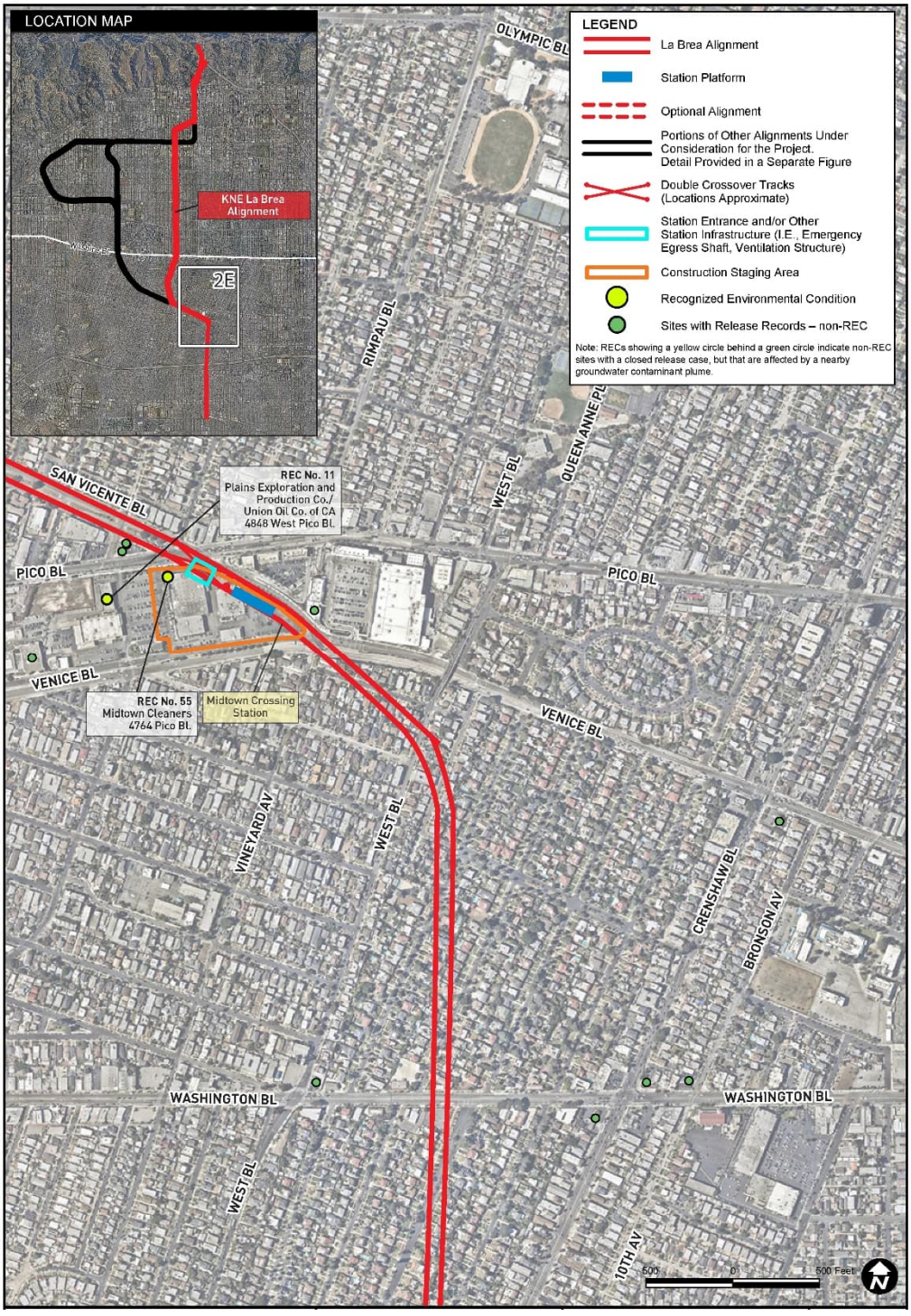
Source: Connect Los Angeles Partners 2023a
* Sites with an asterisk (*) and shown in **bold** are on the Cortese list.
Note: Map ID numbers refer to Figure 3.11-16 through Figure 3.11-21 and may not be consecutive or in numerical order.
N/A = not applicable

FIGURE 3.11-16. REC SITES WITHIN KNE LA BREA ALIGNMENT RESOURCE STUDY AREA (PAGE 1 OF 6)



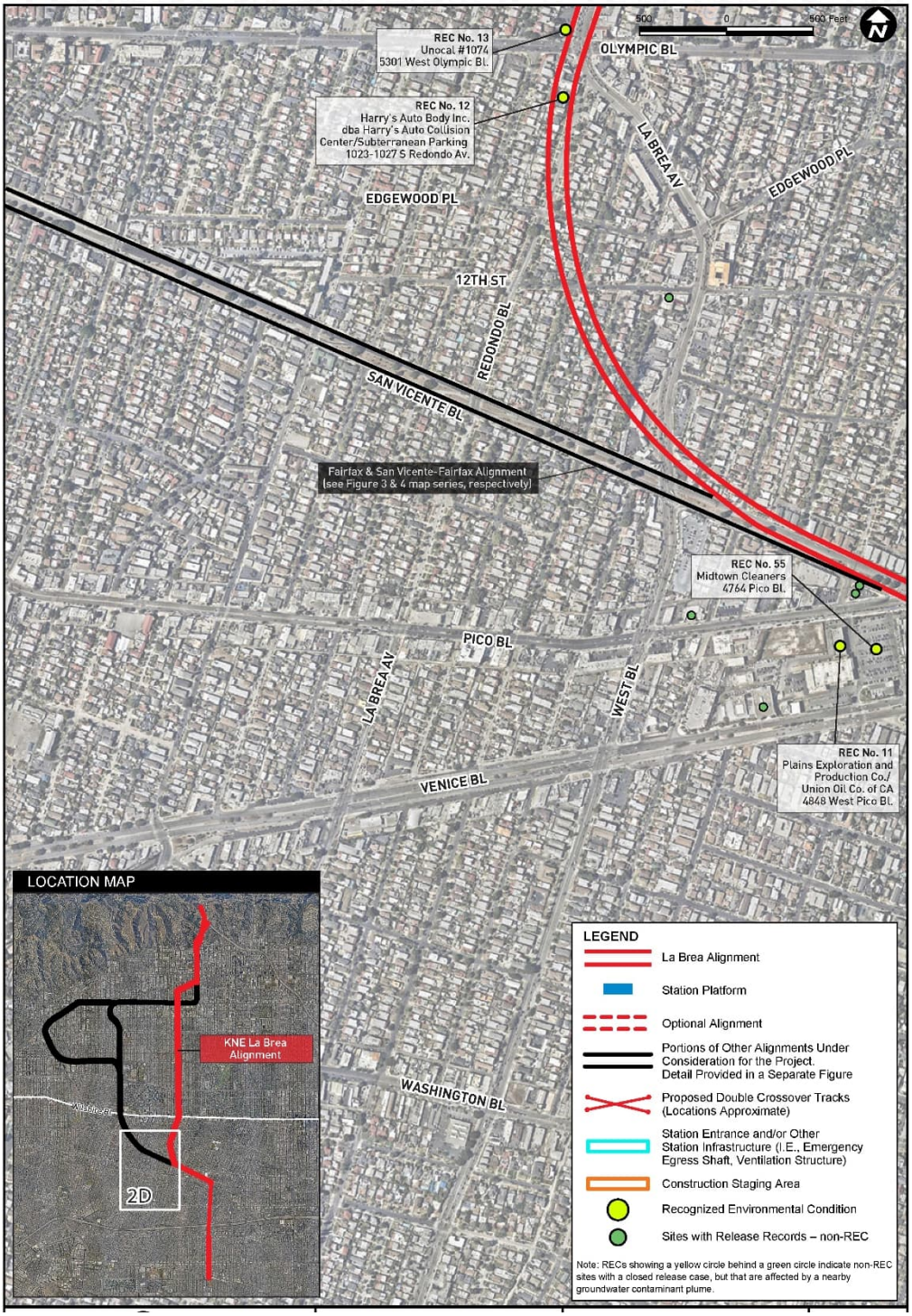
Source: Connect Los Angeles Partners 2023a

FIGURE 3.11-17. REC SITES WITHIN KNE LA BREA ALIGNMENT RESOURCE STUDY AREA (PAGE 2 OF 6)



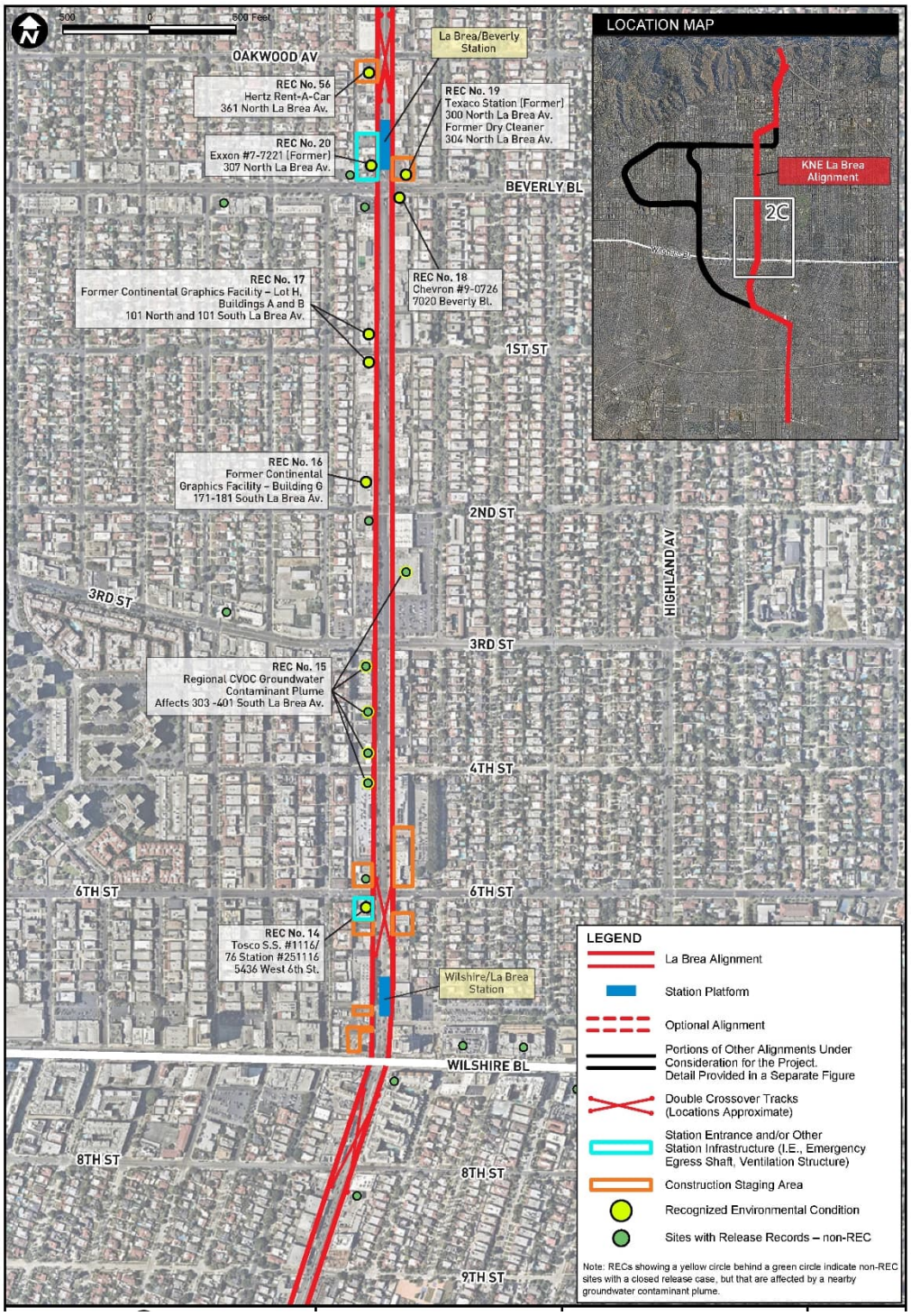
Source: Connect Los Angeles Partners 2023a

FIGURE 3.11-18. REC SITES WITHIN KNE LA BREA ALIGNMENT RESOURCE STUDY AREA (PAGE 3 OF 6)



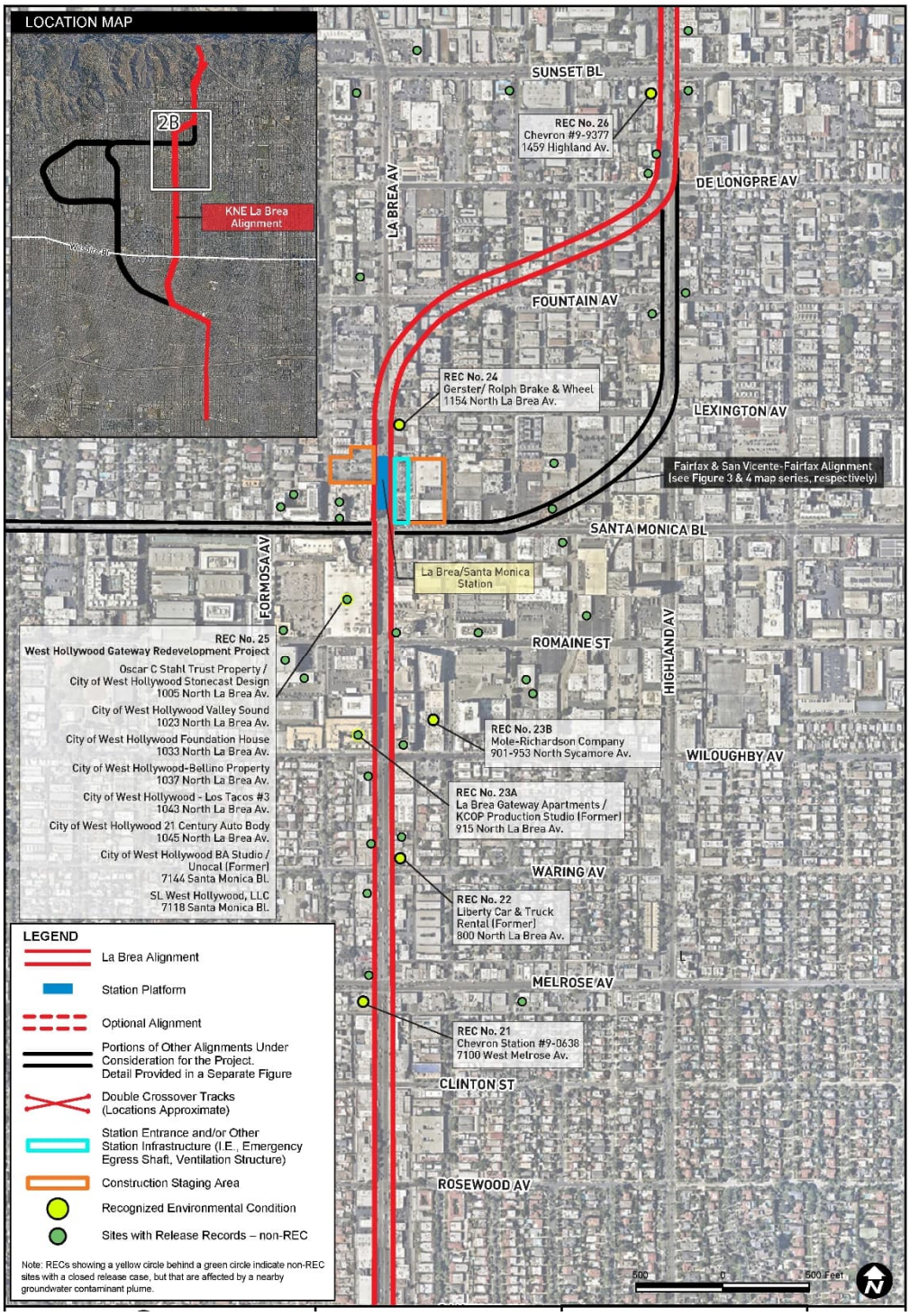
Source: Connect Los Angeles Partners 2023a

FIGURE 3.11-19. REC SITES WITHIN KNE LA BREA ALIGNMENT RESOURCE STUDY AREA (PAGE 4 OF 6)



Source: Connect Los Angeles Partners 2023a

FIGURE 3.11-20. REC SITES WITHIN KNE LA BREA ALIGNMENT RESOURCE STUDY AREA (PAGE 5 OF 6)



Source: Connect Los Angeles Partners 2023a

FIGURE 3.11-21. REC SITES WITHIN KNE LA BREA ALIGNMENT RESOURCE STUDY AREA (PAGE 6 OF 6)

Source: Connect Los Angeles Partners 2023a

3.11.5.1.1.2 HOLLYWOOD BOWL DESIGN OPTION

REC #27: Hollywood Hills Cleaners is the only REC site within the RSA of the Hollywood Bowl Design Option (Connect Los Angeles Partners 2023a). This site is not on the Cortese list. It is also in the RSAs of the primary alignments, as shown in Table 3.11-1 and depicted on Figure 3.11-8 for the KNE San Vicente–Fairfax Alignment.

3.11.5.1.1.3 MAINTENANCE AND STORAGE FACILITY

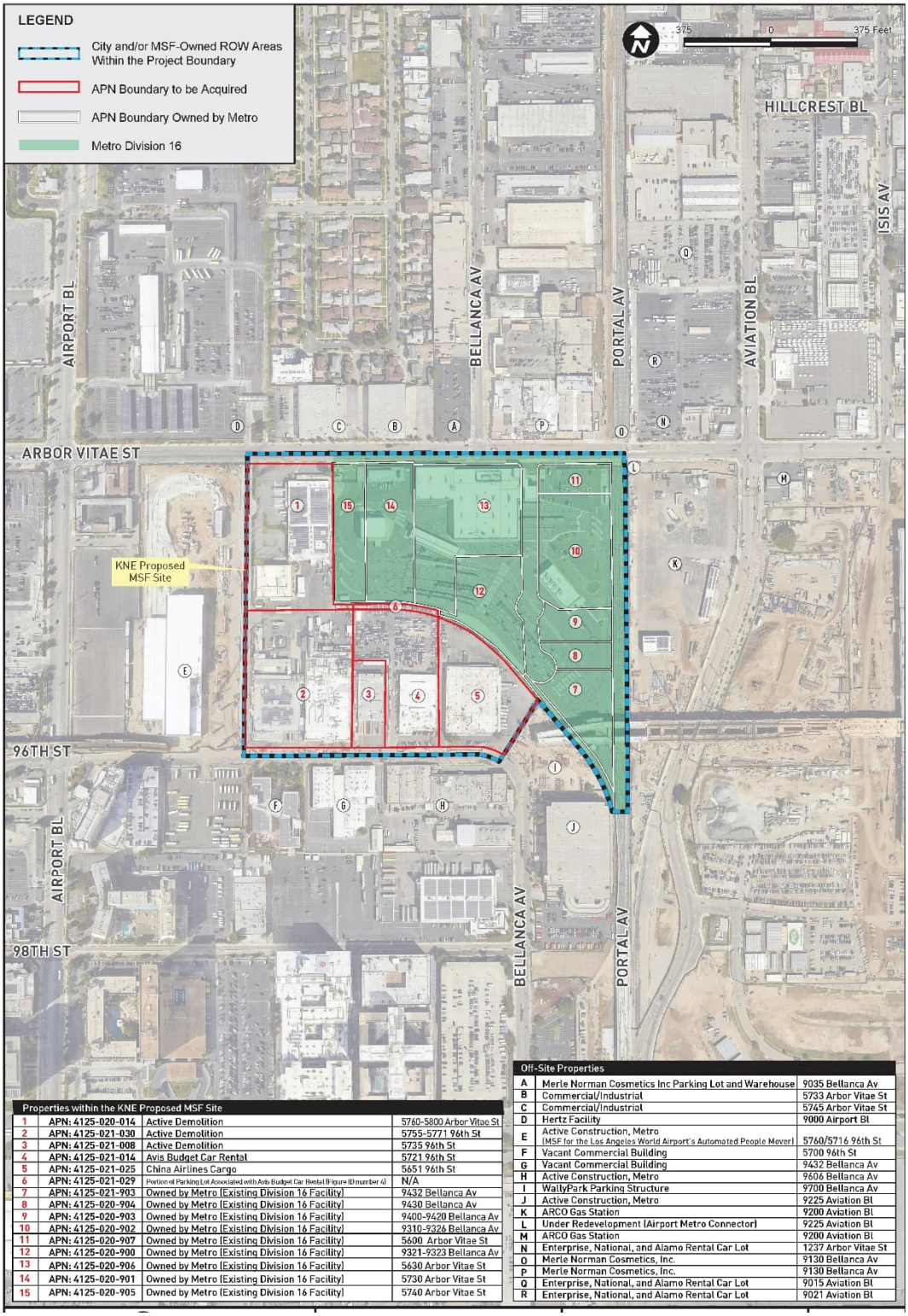
The majority of the MSF RSA is located in the City of Los Angeles, but a small part of the RSA northeast of the MSF is located in the City of Inglewood. Nine RECs are within the RSA of the MSF; two of these sites are on the Cortese list (Connect Los Angeles Partners 2023b). These facilities are identified in Table 3.11-4 and depicted on Figure 3.11-22.

TABLE 3.11-4. REC SITES WITHIN MSF RESOURCE STUDY AREA

MAP ID	PARCEL #	CASE STATUS	NAME	ADDRESS
1*/2/3/K	**APN 4125-020-014** APN 4125-021-030 APN 4125-021-008 APN 4125-021-011	No Case Exists	**LA Airport Industrial Owner LP/ Neutrogena Research & Development**/Neutrogena Manufacturing/Neutrogena/Johnson & Johnson Consumer-Los Angeles Facility; Neutrogena Corporation	5760-5800 Arbor Vitae St, Los Angeles, 5755-5771 W 96th St, Los Angeles
4	APN 4125-021-014	No Case Exists	Avis Rent-A-Car System, LLC/Grand Rent-A-Car DBA Avis RAC/Dent Wizard International	5721 W 96th St, Los Angeles
5	APN 4125-021-025	No Case Exists	Airborne Freight Corporation/Airborne Express	5651 W 96th St, Los Angeles
6	APN 4125-021-007	No Case Exists	Gourmet Logistics; Flying Tiger Line Inc.; Metro	9432 Bellanca Ave, Los Angeles
10	APN 4125-020-902	No Case Exists	ASG Forwarding Inc./Jonas & Associates/Blanca Air Freight LTD Partner/Tokyo Air-Cargo America Inc./ Allan Jones/Dollar Rent-A-Car Parking Lot	9310-9326 Bellanca Ave, Los Angeles
11*	**APN 4125-020-005**	**No Case Exists**	**Former King Delivery, Inc.; Metro Division 16**	**5600 Arbor Vitae St, Westchester**
12	APN 4125-020-900	No Case Exists	Western Federal Credit Union/Ace Janitorial Supply Company	9321-9323 Bellanca Ave, Los Angeles
13	APN 4125-020-003	No Case Exists	Dollar Rent-A-Car/Metro Division 16	5630 Arbor Vitae St, Los Angeles
P	APN 4128-001-007	Open	Hertz Rent-A-Car (1198-77)/Hertz Corporation; Condon Johnson/Garrett Airsearch-Arbor Vitae/Honeywell International Inc./Garret Thermal System	9225 Aviation Blvd, Los Angeles

Source: Connect Los Angeles Partners 2023b
* Sites with an asterisk (*) and shown in **bold** are on the Cortese list.
Note: Map ID numbers refer to Figure 3.11-22 and may not be consecutive or in numerical order.

FIGURE 3.11-22. REC SITES WITHIN MSF RESOURCE STUDY AREA



Properties within the KNE Proposed MSF Site			
1	APN: 4125-020-014	Active Demolition	5760-5800 Arbor Vitae St
2	APN: 4125-021-030	Active Demolition	5755-5771 96th St
3	APN: 4125-021-008	Active Demolition	5735 96th St
4	APN: 4125-021-014	Avis Budget Car Rental	5721 96th St
5	APN: 4125-021-025	China Airlines Cargo	5651 96th St
6	APN: 4125-021-029	Portion of Parking Lot Associated with Avis Budget Car Rental (Figure ID number 4)	N/A
7	APN: 4125-021-903	Owned by Metro (Existing Division 16 Facility)	9432 Bellanca Av
8	APN: 4125-020-904	Owned by Metro (Existing Division 16 Facility)	9430 Bellanca Av
9	APN: 4125-020-903	Owned by Metro (Existing Division 16 Facility)	9400-9420 Bellanca Av
10	APN: 4125-020-902	Owned by Metro (Existing Division 16 Facility)	9310-9326 Bellanca Av
11	APN: 4125-020-907	Owned by Metro (Existing Division 16 Facility)	5600 Arbor Vitae St
12	APN: 4125-020-900	Owned by Metro (Existing Division 16 Facility)	9321-9323 Bellanca Av
13	APN: 4125-020-906	Owned by Metro (Existing Division 16 Facility)	5630 Arbor Vitae St
14	APN: 4125-020-901	Owned by Metro (Existing Division 16 Facility)	5730 Arbor Vitae St
15	APN: 4125-020-905	Owned by Metro (Existing Division 16 Facility)	5740 Arbor Vitae St

Off-Site Properties		
A	Merle Norman Cosmetics Inc Parking Lot and Warehouse	9035 Bellanca Av
B	Commercial/Industrial	5733 Arbor Vitae St
C	Commercial/Industrial	5745 Arbor Vitae St
D	Hertz Facility	9000 Airport Bl
E	Active Construction, Metro (MSF for the Los Angeles World Airport's Automated People Mover)	5760/5716 96th St
F	Vacant Commercial Building	5700 96th St
G	Vacant Commercial Building	9432 Bellanca Av
H	Active Construction, Metro	9606 Bellanca Av
I	WallyPark Parking Structure	9700 Bellanca Av
J	Active Construction, Metro	9225 Aviation Bl
K	ARCO Gas Station	9200 Aviation Bl
L	Under Redevelopment (Airport Metro Connector)	9225 Aviation Bl
M	ARCO Gas Station	9200 Aviation Bl
N	Enterprise, National, and Alamo Rental Car Lot	1237 Arbor Vitae St
O	Merle Norman Cosmetics, Inc.	9130 Bellanca Av
P	Merle Norman Cosmetics, Inc.	9130 Bellanca Av
Q	Enterprise, National, and Alamo Rental Car Lot	9015 Aviation Bl
R	Enterprise, National, and Alamo Rental Car Lot	9021 Aviation Bl

Source: Connect Los Angeles Partners 2023b

3.11.5.1.2 AERIALLY DEPOSITED LEAD

Areas around freeways, highways, and major thoroughfares could be affected by aerially deposited lead (ADL) from vehicular emissions. Exposed soils around roadways in the urbanized areas of California have been found to be contaminated with lead, primarily as a result of historical emissions from automobile exhaust. Results of in-situ sampling and laboratory testing from other unrelated projects have shown that some of the soil contains concentrations of lead in excess of state regulatory thresholds; thus, any waste generated from the disturbance of soil in these locations may require regulation as a hazardous waste. Lead poses a health risk because of the known toxic effects of lead exposure to the central nervous system, kidneys, and blood stream. It is of particular concern to children due to increased risk on developing organs.

3.11.5.1.2.1 ALIGNMENTS AND STATIONS

Each of the stations associated with the KNE alignments would be located along main roads and/or near highways/freeways. ADL may be present in the shallow soils at each station location, at the location of the double crossover tracks, and on the properties slated for acquisition for station entrances or for construction staging. The remainder of the alignments would be situated at greater depths, and soils at those depths will not have been exposed to ADL.

3.11.5.1.2.2 HOLLYWOOD BOWL DESIGN OPTION

The station associated with the Hollywood Bowl Design Option is located along Highland Avenue in proximity to the US-101 freeway. ADL may be present in the shallow soils at the construction staging areas. The remainder of the design option would be situated at greater depths, and soils at those depths will not have been exposed to ADL.

3.11.5.1.2.3 MAINTENANCE AND STORAGE FACILITY

The MSF site is bounded by 96th Street on the south and West Arbor Vitae Street on the north. ADL may be present in the shallow soils on the properties slated for acquisition for the MSF.

3.11.5.1.3 LEAD-BASED PAINT

Lead-based paint (LBP) is defined by the U.S. Department of Housing and Urban Development as paint containing more than 0.5 percent lead by weight. LBP was generally applied to structures before 1977, and particularly those older than 1950. Structures that are planned to be acquired as part of the project may contain LBP. LBP poses a health risk because of the known toxic effects of lead exposure to the central nervous system, kidneys, and blood stream. It is of particular concern to children due to increased risk on developing organs.

3.11.5.1.3.1 ALIGNMENTS AND STATIONS

Each of the stations associated with the KNE alignments has at least one property planned for acquisition to accommodate the station entrance(s) and/or the construction staging areas that have structures currently on the property. The potential exists for these structures to contain LBP.

3.11.5.1.3.2 HOLLYWOOD BOWL DESIGN OPTION

No structures exist on the properties planned for acquisition to accommodate the station entrance(s) and/or the construction staging areas; therefore, LBP is not a concern for the design option.

3.11.5.1.3.3 MAINTENANCE AND STORAGE FACILITY

Several structures exist on the properties planned for acquisition on the MSF site, and the potential exists for these structures to contain LBP.

3.11.5.1.4 ASBESTOS-CONTAINING MATERIALS

Asbestos is a class of naturally occurring mineral that was widely used in building materials due to its insulating and non-flammable properties. Some asbestos-containing material (ACM) may deteriorate, allowing fibers of asbestos to become airborne, where they may be inhaled and trapped in the lungs. Long-term inhalation exposure to ACM has been linked to asbestosis and mesothelioma.

3.11.5.1.4.1 ALIGNMENTS AND STATIONS

Each of the stations associated with the KNE alignments has at least one property planned for acquisition to accommodate the station entrance(s) and/or the construction staging areas that have structures currently on the property. The potential exists for these structures to contain ACM.

3.11.5.1.4.2 HOLLYWOOD BOWL DESIGN OPTION

No structures exist on the properties planned for acquisition to accommodate the station entrance(s) and/or the construction staging areas; therefore, ACM is not a concern for the design option.

3.11.5.1.4.3 MAINTENANCE AND STORAGE FACILITY

Several structures exist on the properties planned for acquisition on the MSF site, and the potential exists for these structures to contain ACM.

3.11.5.1.5 POLYCHLORINATED BIPHENYLS

Electrical transformers, hydraulic equipment, capacitors, and similar equipment may contain polychlorinated biphenyls (PCBs) in hydraulic or dielectric insulating fluids within the units. The federal Toxic Substances Control Act has generally prohibited the domestic manufacture of PCBs since 1976; therefore, equipment manufactured after 1976 has a lower potential to contain PCBs. PCBs are man-made chlorinated hydrocarbons and are carcinogens, posing a risk to many different organs. If electrical or hydraulic equipment containing PCBs is damaged, PCB-containing fluids may leak and affect human health and/or the environment.

3.11.5.1.5.1 ALIGNMENTS AND STATIONS

Electrical transformers, hydraulic equipment, capacitors, and similar equipment located along the KNE alignments may contain PCBs in hydraulic or dielectric insulating fluids within the units.

3.11.5.1.5.2 HOLLYWOOD BOWL DESIGN OPTION

No electrical transformers or hydraulic equipment exists on the properties planned for acquisition to accommodate the station entrance(s) and/or the construction staging areas; therefore, PCBs are not a concern for the design option.

3.11.5.1.5.3 MAINTENANCE AND STORAGE FACILITY

Several commercial or industrial structures exist on the properties planned for acquisition of the MSF site, and the potential exists for these structures to have equipment that contains PCBs.

3.11.5.1.6 PESTICIDES

Agricultural activities commonly include the storage, handling, and application of pesticides (and herbicides) on row crops or orchards. The routine application of such compounds may not accumulate to soil concentrations requiring regulatory oversight. The main areas of concern are handling and storage areas. Pesticides, which also include herbicides, prevent, destroy, repel, or mitigate a pest, or are a plant regulator, defoliant, desiccant, or nitrogen stabilizer. Pesticides typically are of two main types: organochlorine pesticides and arsenical herbicides. In general, pesticides and herbicides are not very mobile in soils and are commonly found within approximately three feet of the ground surface. Portions of the RSA were historically undeveloped or may have been used for agricultural purposes; therefore, the presence of pesticides in the shallow soils is possible.

Pesticides pose differing levels of risk to humans depending on the variety of pesticide and the concentration. Cancer, reproductive harm, and neurological toxicity are a few of the risks posed by this class of chemical.

3.11.5.1.6.1 ALIGNMENTS AND STATIONS

No agricultural activities are known to have occurred along the KNE alignments; therefore, pesticides are not a concern.

3.11.5.1.6.2 HOLLYWOOD BOWL DESIGN OPTION

No agricultural activities are known to have occurred along the Hollywood Bowl Design Option; therefore, pesticides are not a concern.

3.11.5.1.6.3 MAINTENANCE AND STORAGE FACILITY

The MSF site appears to have been used for agricultural purposes until about 1950. It is likely that pesticides were regularly applied to the property for many years, making it likely that residual pesticides could be present in the soils on the MSF.

3.11.5.1.7 OIL AND GAS FIELDS

Oil and gas fields are areas with current and/or historical production of oil and gas from multiple wells. Locations of oil wells (active, idle, and abandoned) were plotted from the California Geologic Energy Management Division (CalGEM) online Well Finder (WellSTAR) database. Contaminants from naturally occurring petroleum substances are also often present around the wells. In addition, the well fields are a source of naturally occurring subsurface methane and hydrogen sulfide gases. Existing old wells, if not properly cased and sealed, could allow upward migration of petroleum and gases into the near subsurface, affecting an area beyond the well casing. The presence of the gases is an existing condition. Current and historical oil wells typically used a mud pit during the drilling process, the remains of which may still be present in the vicinity of the oil well. In addition, contamination from these former mud pits and the associated pipelines and storage tanks supporting drilling of the oil well may be present near each former oil well and may be encountered during grading and construction.

The primary hazards associated with oil and gas fields stem from contaminated soil and groundwater, and the presence of subsurface gases—primarily methane and hydrogen sulfide. Methane and hydrogen sulfide are considered hazardous because of their explosive properties. Also, hydrogen sulfide, which can be smelled at low, non-toxic levels, is highly toxic if inhaled at higher concentrations. These gases can seep from the surrounding soil and through fractures or faults in the ground into buildings and into open excavations, such as tunnels. In certain concentrations, the presence of methane requires mitigation measures. Methane may accumulate in subsurface or enclosed spaces; if ignited, it can result in substantial property damage and destruction and/or injury/death. Hydrogen sulfide is a toxic gas that can result in poisoning and, at a range of higher concentrations, death.

In parallel with these City of Los Angeles policies for management of the hazard of methane, Metro is developing criteria for safe design, construction, and operation of underground rail transit stations and tunnels with the pervasive and unavoidable hazards associated with oil and gas fields. The presence of gases was characterized in substantial detail as part of subsurface investigations for the Metro Purple Line (D Line) Extension projects that constructed tunnels and underground stations along Wilshire Boulevard. All KNE alignments would intersect the D Line Extension on Wilshire Boulevard.

3.11.5.1.7.1 ALIGNMENTS AND STATIONS

The design and construction of subsurface components of the project (tunnels, accessways, stations, etc.) within the boundaries of the oil and gas fields will require protection from volatile organic compounds (VOCs), methane, and/or hydrogen sulfide gases. As shown on shown on Figure 3.11-23, Figure 3.11-24, and Figure 3.11-25, the alignment RSAs include the following oil and gas fields:

- The KNE San Vicente–Fairfax Alignment (Figure 3.11-23) passes through four separate oil and gas fields: the La Cienegas, the Salt Lake South, the Salt Lake, and the Sherman. Two additional oil and gas fields (the Beverly Hills and the San Vicente) are within the RSA, but the alignment does not pass through the boundaries of these fields. The following five proposed stations are within the boundaries of an oil and gas field: Midtown Crossing, Wilshire/Fairfax, Fairfax/3rd, La Cienega/Beverly, and San Vicente/Santa Monica Stations.
- The KNE Fairfax Alignment (Figure 3.11-24) passes through three separate oil and gas fields: the Las Cienegas, the Salt Lake South, and the Salt Lake. One additional oil and gas field (the Beverly Hills) is within the RSA, but the alignment does not pass through the boundaries of this field. The following three proposed stations are within the boundaries of an oil and gas field: Midtown Crossing, Wilshire/Fairfax, and Fairfax/3rd.
- The KNE La Brea Alignment (Figure 3.11-25) passes through two separate oil and gas fields: the Las Cienegas and the Salt Lake. One additional oil and gas field (the Salt Lake South) is within the RSA, but the alignment does not pass through the boundaries of this field. The following two proposed stations are within an oil and gas field: Midtown Crossing and La Brea/Beverly; the Wilshire/La Brea Station would be located along the edge of an oil and gas field.

In addition, numerous plugged and idle oil and gas wells are located within the alignment and station RSAs; some of these wells may be within an alignment and station footprint.

3.11.5.1.7.2 HOLLYWOOD BOWL DESIGN OPTION

The Hollywood Bowl Design Option does not pass through an oil and gas field.

3.11.5.1.7.3 MAINTENANCE AND STORAGE FACILITY

The MSF site is not located within an oil and gas field.

FIGURE 3.11-23. OIL AND GAS FIELDS IN VICINITY OF KNE SAN VICENTE–FAIRFAX ALIGNMENT

Source: Connect Los Angeles Partners 2023

FIGURE 3.11-24. OIL AND GAS FIELDS IN VICINITY OF KNE FAIRFAX ALIGNMENT

Source: Connect Los Angeles Partners 2023

FIGURE 3.11-25. OIL AND GAS FIELDS IN VICINITY OF KNE LA BREA ALIGNMENT

Source: Connect Los Angeles Partners 2023

3.11.5.1.8 PETROLEUM PIPELINES

Petroleum pipelines can carry such products as crude and refined oil, kerosene, gasoline, or natural gas at different times. The pipelines can degrade over time and begin leaking, contaminating the surrounding soil and/or groundwater before the leak is noticed.

3.11.5.1.8.1 ALIGNMENTS AND STATIONS

As shown on Figure 3.11-26, Figure 3.11-27, and Figure 3.11-28, the following pipelines cross the alignments or are in the RSAs:

- The KNE San Vicente–Fairfax Alignment (Figure 3.11-26) crosses one hazardous liquid pipeline at West 29th Street, one block south of the Crenshaw/Adams Station. Three additional hazardous liquid pipelines are within the RSA; however, the alignment does not cross them. These pipelines are present southwest of the Midtown Crossing Station, south of the Wilshire/Fairfax Station, and south of the La Cienega/Beverly Station.
- The KNE Fairfax Alignment (Figure 3.11-27) crosses one hazardous liquid pipeline at West 29th Street, one block south of the Crenshaw/Adams Station. Two additional hazardous liquid pipelines are within the RSA; however, the alignment does not cross them. These pipelines are present southwest of the Midtown Crossing Station, and south of the Wilshire/Fairfax Station.
- The KNE La Brea Alignment (Figure 3.11-28) crosses one hazardous liquid pipeline at West 29th Street one block south of the Crenshaw/Adams Station. One additional hazardous liquid pipeline is within the RSA; however, the alignment does not cross it. This pipeline is present southwest of the Midtown Crossing Station.

No accidents or incidents were reported along the pipeline in the vicinity of the KNE alignments as of February 23, 2023.

3.11.5.1.8.2 HOLLYWOOD BOWL DESIGN OPTION

The Hollywood Bowl Design Option does not intersect with any petroleum pipelines.

3.11.5.1.8.3 MAINTENANCE AND STORAGE FACILITY

The MSF site is bounded along the north and east sides by two natural gas transmission pipelines, as shown on Figure 3.11-29. No accidents or incidents were reported along these pipelines near the MSF as of February 23, 2023.

FIGURE 3.11-26. PETROLEUM PIPELINES WITHIN KNE SAN VICENTE–FAIRFAX ALIGNMENT RESOURCE STUDY AREA

Source: Connect Los Angeles Partners 2023

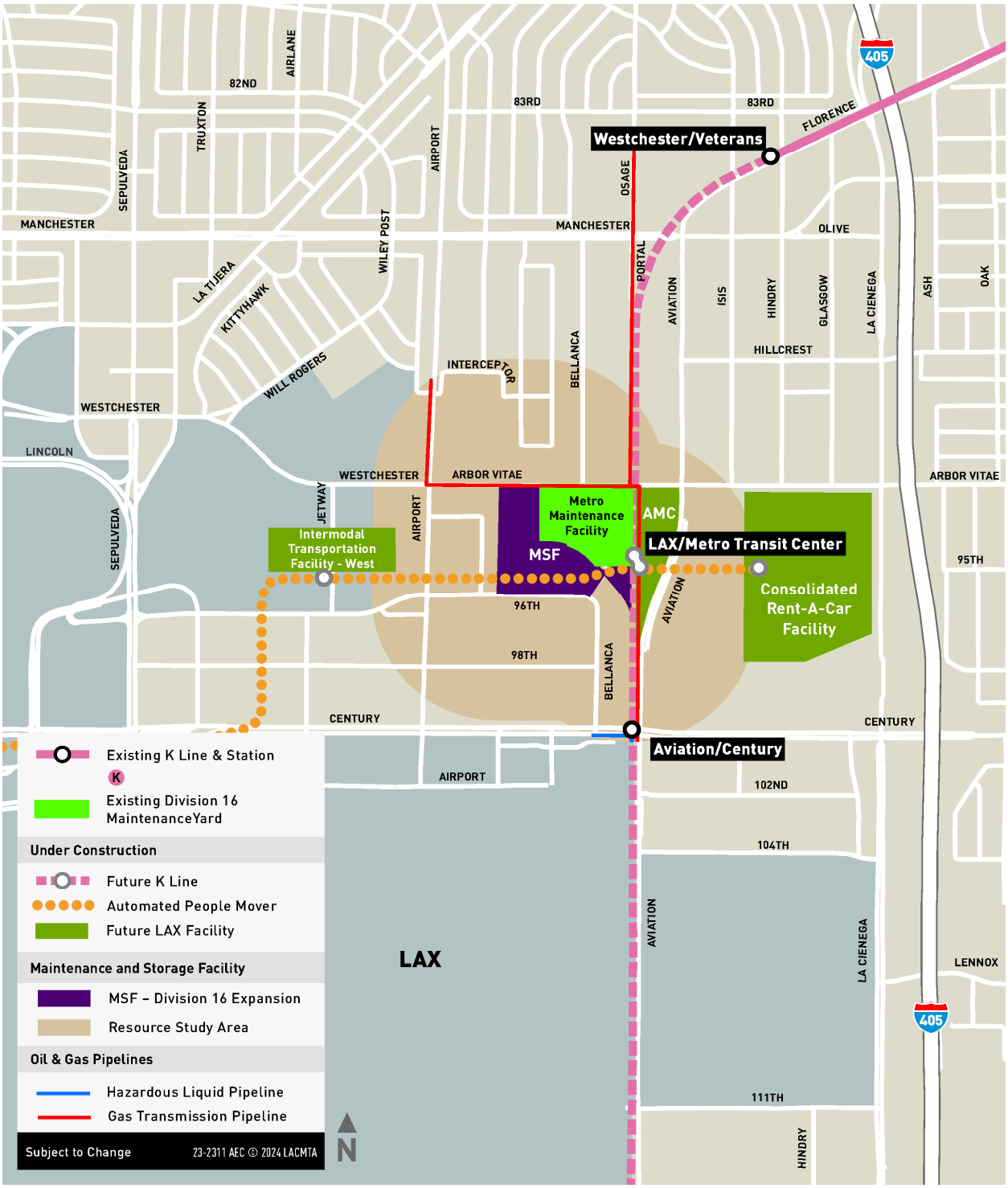
FIGURE 3.11-27. PETROLEUM PIPELINES WITHIN KNE FAIRFAX ALIGNMENT RESOURCE STUDY AREA

Source: Connect Los Angeles Partners 2023

FIGURE 3.11-28. PETROLEUM PIPELINES WITHIN KNE LA BREA ALIGNMENT RESOURCE STUDY AREA

Source: Connect Los Angeles Partners 2023

FIGURE 3.11-29. PETROLEUM PIPELINES WITHIN MSF RESOURCE STUDY AREA



Source: Connect Los Angeles Partners 2023

3.11.5.1.9 RAILROADS

Railroad properties (including current and former rail lines and spur lines) are often contaminated due to a variety of factors. The corridors are sprayed for vegetation suppression and are used to transport a variety of freight. Spills or leaks of solid and liquid substances accumulate over time along the tracks, and contaminants leach into the subsurface soils. Ballast rock, which is used to create a solid base for railroad tracks to rest on, sometimes include slag and clinkers from industrial processes; ultramafic rock fragments that contain naturally occurring asbestos; or other contaminants. Contaminants found along railroad lines may include a variety of petroleum products, solvents, heavy metals, pesticides, asbestos, and treated wood waste (railroad ties), each of which are toxic in different ways.

3.11.5.1.9.1 ALIGNMENTS AND STATIONS

The westernmost portion of the KNE San Vicente–Fairfax Alignment crosses or is in proximity to the site of a railroad line that ran along San Vicente Boulevard and Santa Monica Boulevard from at least the early 1890s through the 1950s. Another railroad line, the existing at-grade Metro E Line, is present near the southern end of the alignment along West Exposition Boulevard.

The KNE Fairfax Alignment crosses a railroad line—the existing at-grade Metro E Line—at the southern end of the alignment along West Exposition Boulevard.

The KNE La Brea Alignment crosses a railroad line—the existing at-grade Metro E Line—at the southern end of the alignment along West Exposition Boulevard.

3.11.5.1.9.2 HOLLYWOOD BOWL DESIGN OPTION

The Hollywood Bowl Design Option does not intersect with any railroad lines.

3.11.5.1.9.3 MAINTENANCE AND STORAGE FACILITY

The MSF site is bounded along the east side by a railroad line, and multiple spur lines are situated within the Division 16 property.

3.11.5.1.10 EDUCATIONAL FACILITIES

Educational facilities are defined as colleges, high schools, elementary schools, preschools, or nursery schools, either public or private. Children are particularly susceptible to impacts from hazardous materials and/or wastes.

3.11.5.1.10.1 ALIGNMENTS AND STATIONS

KNE SAN VICENTE–FAIRFAX ALIGNMENT

The KNE San Vicente–Fairfax Alignment has 26 educational facilities within its RSA, as shown in Table 3.11-5 and depicted on Figure 3.11-30. In cases where the map ID numbers in the table are not consecutive, it is because those facilities are identified on another alignment.

TABLE 3.11-5. EDUCATIONAL FACILITIES WITHIN KNE SAN VICENTE–FAIRFAX ALIGNMENT RESOURCE STUDY AREA

MAP ID	NAME	ADDRESS
1	Virginia Road Elementary School	2925 Virginia Road, Los Angeles
2	ISANA Nascent Academy	3417 W Jefferson Blvd, Los Angeles
3	Montessori Academy of West Adams	4449 W Adams Blvd, Los Angeles
4	Alta Loma Elementary School	1745 Vineyard Ave, Los Angeles
5	Pico Preschool	4436 W Pico Blvd, Los Angeles
6	ReJOYce in Jesus Christian School	1304 S Cochran Ave, Los Angeles
7	Machon LA	5870 W Olympic Blvd, Los Angeles
8	Shalhevet High School	910 S Fairfax Ave, Los Angeles
9	Hancock Park Elementary School	408 S Fairfax Ave, Los Angeles
11	Gindi Maimonides Academy	8511 Beverly Place, Los Angeles
12	West Hollywood Elementary School	970 N Hammond St, West Hollywood
13	Saint Victor Preschool	8634 Holloway Dr, West Hollywood
14	TREE Academy	8628 Holloway Dr, West Hollywood
15	West Hollywood College Preparatory School	1317 N Crescent Heights Blvd, West Hollywood
16	Larchmont Charter School	1265 N Fairfax Ave, West Hollywood
17	Fountain Day School	1128 N Orange Grove Ave, West Hollywood
18	Laurel Early Education Center	8023 Willoughby Ave, Los Angeles
19	Laurel Cinematic Arts & Creative Technologies Magnet	925 N Hayworth Ave, Los Angeles
20	ABC Little School	927 N Fairfax Ave, West Hollywood
21	West Hollywood Preschool	7377 Santa Monica Blvd, West Hollywood
31	Hollywood Schoolhouse	1233 N McCadden Place, Los Angeles
32	Hollywood High School	1521 N Highland Ave, Los Angeles
33	Little Paws Montessori	1341 N Mansfield Ave, Los Angeles
34	Sunset Montessori Preschool	1432 N Sycamore Ave, Los Angeles
35	Selma Avenue Elementary School	6611 Selma Ave, Los Angeles
36	The Oaks School	6817 Franklin Ave, Los Angeles

Source: California Department of Education n.d.; Google Maps 2023
Note: Map ID numbers refer to Figure 3.11-30 and may not be consecutive or in numerical order.

FIGURE 3.11-30. EDUCATIONAL FACILITIES WITHIN KNE SAN VICENTE–FAIRFAX ALIGNMENT RESOURCE STUDY AREA

Source: California Department of Education n.d.

KNE FAIRFAX ALIGNMENT

The KNE Fairfax Alignment has 22 educational facilities within its RSA, as shown in Table 3.11-6 and depicted on Figure 3.11-31. In cases where the map ID numbers in the table are not consecutive, it is because those facilities are identified on another alignment.

TABLE 3.11-6. EDUCATIONAL FACILITIES WITHIN KNE FAIRFAX ALIGNMENT RESOURCE STUDY AREA

MAP ID	NAME	ADDRESS
1	Virginia Road Elementary School	2925 Virginia Road, Los Angeles
2	ISANA Nascent Academy	3417 W Jefferson Blvd, Los Angeles
3	Montessori Academy of West Adams	4449 W Adams Blvd, Los Angeles
4	Alta Loma Elementary School	1745 Vineyard Ave, Los Angeles
5	Pico Preschool	4436 W Pico Blvd, Los Angeles
6	ReJOYce in Jesus Christian School	1304 S Cochran Ave, Los Angeles
7	Machon LA	5870 W Olympic Blvd, Los Angeles
8	Shalhevet High School	910 S Fairfax Ave, Los Angeles
9	Hancock Park Elementary School	408 S Fairfax Ave, Los Angeles
10	Fairfax High School	7850 Melrose Ave, Los Angeles
16	Larchmont Charter School	1265 N Fairfax Ave, West Hollywood
17	Fountain Day School	1128 N Orange Grove Ave, West Hollywood
18	Laurel Early Education Center	8023 Willoughby Ave, Los Angeles
19	Laurel Cinematic Arts & Creative Technologies Magnet	925 N Hayworth Ave, Los Angeles
20	ABC Little School	927 N Fairfax Ave, West Hollywood
21	West Hollywood Preschool	7377 Santa Monica Blvd, West Hollywood
31	Hollywood Schoolhouse	1233 N McCadden Place, Los Angeles
32	Hollywood High School	1521 N Highland Ave, Los Angeles
33	Little Paws Montessori	1341 N Mansfield Ave, Los Angeles
34	Sunset Montessori Preschool	1432 N Sycamore Ave, Los Angeles
35	Selma Avenue Elementary School	6611 Selma Ave, Los Angeles
36	The Oaks School	6817 Franklin Ave, Los Angeles

Source: California Department of Education n.d.; Google Maps 2023
Note: Map ID numbers refer to Figure 3.11-31 and may not be consecutive.

FIGURE 3.11-31. EDUCATIONAL FACILITIES WITHIN KNE FAIRFAX ALIGNMENT RESOURCE STUDY AREA

Source: California Department of Education n.d.

KNE LA BREA ALIGNMENT

The KNE La Brea Alignment has 20 educational facilities within its RSA, as shown in Table 3.11-7 and depicted on Figure 3.11-32. In cases where the map ID numbers in the table are not consecutive, it is because those facilities are identified on another alignment.

TABLE 3.11-7. EDUCATIONAL FACILITIES WITHIN KNE LA BREA ALIGNMENT RESOURCE STUDY AREA

MAP ID	NAME	ADDRESS
1	Virginia Road Elementary School	2925 Virginia Road, Los Angeles
2	ISANA Nascent Academy	3417 W Jefferson Blvd, Los Angeles
3	Montessori Academy of West Adams	4449 W Adams Blvd, Los Angeles
4	Alta Loma Elementary School	1745 Vineyard Ave, Los Angeles
5	Pico Preschool	4436 W Pico Blvd, Los Angeles
22	Yeshiva Gedolah of Los Angeles	5444 W Olympic Blvd, Los Angeles
23	Awaken Dreams Creative Learning Center	5555 W Olympic Blvd, Los Angeles
24	Wilshire Crest Elementary School	5241 W Olympic Blvd, Los Angeles
25	Cathedral Chapel School	755 S Cochran Ave, Los Angeles
26	Ohr Eliyahu Academy (Yeshiva Aharon Yaakov Ohr Eliyahu)	241 S Detroit St, Los Angeles
27	Yeshiva Rav Isacsohn/Toras Emes Academy	540 N La Brea Ave, Los Angeles
28	Melrose Avenue Math/Science/Technology Magnet	731 N Detroit St, Los Angeles
29	Yeshiva Ohr Elchonon Chabad	7215 Waring Ave, Los Angeles
30	Cheder of Los Angeles	801 N La Brea Ave, Los Angeles
31	Hollywood Schoolhouse	1233 N McCadden Place, Los Angeles
32	Hollywood High School	1521 N Highland Ave, Los Angeles
33	Little Paws Montessori	1341 N Mansfield Ave, Los Angeles
34	Sunset Montessori Preschool	1432 N Sycamore Ave, Los Angeles
35	Selma Avenue Elementary School	6611 Selma Ave, Los Angeles
36	The Oaks School	6817 Franklin Ave, Los Angeles

Source: California Department of Education n.d.; Google Maps, 2023
Note: Map ID numbers refer to Figure 3.11-32 and may not be consecutive or in numerical order.

FIGURE 3.11-32. EDUCATIONAL FACILITIES WITHIN KNE LA BREA ALIGNMENT RESOURCE STUDY AREA

Source: California Department of Education n.d.

3.11.5.1.10.2 HOLLYWOOD BOWL DESIGN OPTION

The Hollywood Bowl Design Option has one educational facility within its RSA. This facility is the Oaks School at 6817 Franklin Avenue, Los Angeles; the location is listed in Table 3.11-5 and depicted on Figure 3.11-30. This facility is also included in the alignment RSAs.

3.11.5.1.10.3 MAINTENANCE AND STORAGE FACILITY

The MSF site has no educational facilities within its RSA.

3.11.5.1.11 AIRPORTS

3.11.5.1.11.1 ALIGNMENTS AND STATIONS

The KNE alignments are not situated within two miles of an airport (public or private).

3.11.5.1.11.2 HOLLYWOOD BOWL DESIGN OPTION

The Hollywood Bowl Design Option is not situated within two miles of an airport (public or private).

3.11.5.1.11.3 MAINTENANCE AND STORAGE FACILITY

The MSF site is approximately 0.5 mile northeast of LAX.

3.11.5.1.12 WILDLAND FIRES

Wildland fire zones have been identified in the Santa Monica Mountains and the Baldwin Hills in Los Angeles County. Wildland fires pose a risk to people and infrastructure within these zones.

3.11.5.1.12.1 ALIGNMENTS AND STATIONS

The KNE alignments would be situated within a wildland fire zone.

3.11.5.1.12.2 HOLLYWOOD BOWL DESIGN OPTION

The RSA of the Hollywood Bowl Design Option is within a wildland fire zone (Los Angeles Fire Department [LAFD] 2023). The entire design option north of Franklin Street would be within the fire zone, which has a very high fire severity; however, with the exception of the proposed station entrance(s), this portion of the design option would be underground.

3.11.5.1.12.3 MAINTENANCE AND STORAGE FACILITY

The MSF site would not be within a wildland fire zone.

3.11.6 PROJECT MEASURES

Project measures are design features, best management practices (BMPs), or other commitments that Metro would implement as part of all proposed alignments, the design option, and the MSF to reduce or avoid environmental effects associated with project construction and operation. Project measures are not the same as mitigation measures, which are used to reduce an environmental impact's significance level. Where applicable, project measures are also discussed in Section 3.11.7 as part of the evaluation of environmental impacts.

3.11.6.1 PM HAZ-1: RISK REDUCTION FOR SUBSURFACE GAS

The following construction approaches are implemented on Metro projects and reduce risk associated with hazardous materials, in particular related to the risks associated with subsurface gas:

- Hazardous Gases: Methane in air is explosive in the range of concentration from five percent to 15 percent by volume. Very high concentrations of methane are not explosive; however, when diluted by air, the mixture can readily become explosive. The level of five percent methane in air is termed the lower explosive limit (LEL), and below five percent methane in air does not ignite. Safety protocols typically require dilution of methane to less than 10 percent of the LEL.
- Monitoring and Recording of Air Quality at Worksites: Monitoring and recording of air quality within the underground worksites shall be conducted. In areas of gassy soil conditions, air shall be continuously monitored and recorded. Construction shall be altered as required to maintain a safe working atmosphere. The working environment shall be kept in compliance with federal, state, and local regulations, including South Coast Air Quality Management District and Cal/OSHA standards.
- Techniques to Lower the Risk of Exposure to Methane and Hydrogen Sulfide: The primary method for reducing exposure to subsurface gases during tunneling is dilution through the ventilation system. In areas where high levels of hazardous gas are encountered, several additional techniques could be used to lower the risk of exposure. These include isolation of gas from the tunnel environment through use of enclosed tunneling systems such as pressurized-face tunnel boring machines (TBMs), which is mandatory for use on all Metro soft-ground tunnel projects. Where earth pressure balance TBMs are used, a measure to manage hazardous off-gassing from tunnel muck on conveyors is to fully enclose the conveyor from the TBM back to the work shaft. This approach would safely discharge any hazardous gases to the atmosphere outside the tunnel. Increased ventilation capacity and possibly slower rates of tunneling could assist with dilution of gas concentrations to safe levels as defined by Cal/OSHA.

  Secondary measures for reduction in hydrogen sulfide levels could include pre-treatment of groundwater containing hydrogen sulfide by displacing and oxidation of the hydrogen sulfide by injecting water (possibly containing diluted hydrogen peroxide) into the ground and groundwater in advance of the tunnel excavation. This "in-situ oxidation" method reduces hydrogen sulfide levels even before the ground is excavated. Air injection and gas extraction techniques have also been used to oxidize hydrogen sulfide in advance of tunneling. These methods may also be implemented at tunnel-to-station connections or at cross-passage excavation areas. If slurry-face

TBMs are used, the excavated soil with the hazardous gases is transported to the ground surface in a slurry pipeline. When needed to reduce hydrogen sulfide to safe levels for slurry treatment, additives could be mixed with the bentonite (clay) slurry during the tunneling and/or prior to discharge into the slurry separation plant. Following petroleum industry practices with hydrogen sulfide gas in drilling mud, the hydrogen sulfide would be oxidized by injection of hydrogen peroxide. In all cases, air quality standards would comply with Cal/OSHA requirements for a safe working environment.

- Oil Well Locations and Abandonment: In areas where historic oil wells have been documented, pre-construction geophysical (magnetic) surveys shall be conducted to more precisely detect the locations of oil wells. It is anticipated that the geophysical surveys shall be performed along the proposed tunnel alignment prior to construction in the areas of known oil production and mapped wells. Detection of oil wells shall include use of magnetic devices (magnetometers) to sense oil well casings within the tunnel alignment. This survey could also use techniques such as ground-penetrating radar and electromagnetic testing procedures to screen for oil well casings and other suspected subsurface obstructions along the tunnel. These methods could be initiated from the ground surface, in horizontal holes drilled using horizontal directional drilling techniques, or a combination of methods. Shallow excavations may be made to expose and observe anomalies that are detected. Where the tunnel alignment cannot be adjusted to avoid a well casing, CalGEM shall be contacted to determine the appropriate method to re-abandon the well. Oil well abandonment must proceed in accordance with California Laws for Conservation of Petroleum and Gas (1997), Division 3. Oil and gas, Chapter 1. Oil and Gas Conservation, Article 4, Sections 3228, 3229, 3230, and 3232. The requirements include written notification to CalGEM, protection of adjacent property, and before commencing any work to abandon any well, obtaining approval by CalGEM. Abandonment work, including sealing off oil/gas bearing units, pressure grouting, etc., must be performed by a state-licensed contractor under the regulatory oversight and approval of CalGEM. During construction, if an unknown well is encountered, the contractor shall notify Metro, Cal/OSHA, and the Division of Oil, Gas, and Geothermal Resources for well abandonment, and proceed in accordance with state requirements.
- Worker Safety for Gassy Tunnels: Cal/OSHA requires the use of W65 self-rescuers, a breathing apparatus required for safety during evacuation of fires.
- Gas Monitoring – Assessment: Gas monitoring wells shall be installed along the alignment during the preliminary geotechnical investigations. Additional multistage (varying depths) soil gas wells (or probes) shall be installed along the alignment in areas where elevated gas has been detected. The probes shall be monitored for methane, hydrogen sulfide, oxygen, and carbon dioxide before, during, and after tunneling. Ambient air monitoring shall also be performed at the ground surface to screen for indications of soil gas emissions. Any instance where methane is detected at or above a concentration of 5,500 parts per million (ppm) (10 percent LEL) or hydrogen sulfide is detected at or above a concentration of 10 ppm (OSHA permissible exposure limit) in a soil probe (five feet below the ground surface) shall be investigated. Where these levels are exceeded, combustible gas monitoring shall be performed in the interior of the closest building. In the unlikely event that elevated gas levels are found—and persist—the affected building(s) shall be ventilated to reduce the gas levels.

During design, construction, and operations, Metro shall implement the following measures to further reduce risks associated with subsurface gas:

- Metro Rail Design Criteria (MRDC) has comprehensive and proven requirements for mitigating, to the point of practically eliminating, the hazard of subsurface gases. Elements of the MRDC are elaborated below.
- Hazardous Subsurface Gas Operations: As with the existing B (Red) and D (Purple) Lines, K (Crenshaw/LAX) Line, and Regional Connector, as well as the planned Metro E (Gold) Line Eastside Extension, Metro shall install gas monitoring and detection systems with alarms, as well as ventilation equipment to dissipate gas to safe levels according to Metro's current design criteria and Cal/OSHA standards for a safe work or operating environment. Measures shall include, but are not limited to, the following for both tunnel and station operation:
  - High volume ventilation systems with back-up power sources
  - Gas detection systems with alarms
  - Emergency ventilation triggered by the gas detection systems
  - Automatic equipment shut-off
  - Maintenance and operations personnel training
  - Emergency Ventilation Operating Procedures established during design to operate emergency ventilation that is customized to the specifics of each underground transit line
  - Gas detection instrumentation is set to send alarms to activate ventilation systems and evacuate the structures as follows: methane gas—minor alarm at 10 percent of the LEL (activate ventilation) and major alarm at 20 percent of the LEL (evacuation of area)
  - Hydrogen sulfide—Minor alarm at 8 ppm and major alarm at 10 ppm
- Hazardous Subsurface Gas Structural Design: Tunnels and stations shall be designed to provide a redundant protection system against gas intrusion hazard. The primary protection from hazardous gases during operations is provided by the physical barriers (tunnel and station liner membranes) that keep gas out of tunnels and stations. High density polyethene (HDPE) is impermeable to and non-soluble in methane and hydrogen sulfide. As with the existing B and D Lines and Regional Connector, as well as the planned Metro E Line Eastside Extension, tunnels and stations shall be designed to exclude gas to below alarm levels and include gas monitoring and detection systems with alarms, as well as ventilation equipment to dissipate gas. At stations in elevated gassy ground (e.g., Wilshire/Fairfax), construction could be accomplished using slurry walls—or similar methods such as continuous drilled piles—to provide a reduction of gas inflow both during and after construction than would occur with conventional soldier piles and lagging excavation support. Other station design concepts to reduce gas and water leakage are the use of additional barriers, compartmentalized barriers to facilitate leak sealing, and flexible sealants such as poly-rubber gels, along with HDPE-type materials used on Metro's underground stations. Consideration of secondary station walls to provide additional barriers or an active system (low- or high-pressure barrier) shall also be studied further to determine if they would be incorporated into the project.

- Tunnel Advisory Panel Design Review: The Metro Tunnel Advisory Panel shall review designs with respect to geologic hazards in areas of identified higher risk. The panel shall be supplemented, as necessary, by qualified experts in seismic design, gas intrusion, and ground contaminant effects on underground structures.

3.11.6.2 PM TRA-2: TRANSPORTATION BEST MANAGEMENT PRACTICES

Transportation BMPs during construction of the alignments and stations, the design option, and the MSF shall include the following:

- Cooperation with the corridor cities and the California Department of Transportation (Caltrans) 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 alignments, the design option, and the MSF shall be maintained during construction.
- Construction activities shall comply with OSHA, California OSHA, and Metro safety and security programs.
- Safety for pedestrians, bicyclists, and motorists shall be maintained during construction using signage, partial lane closures, construction barriers, and supervision by safety and security personnel at access points and throughout construction sites.
- Metro shall prepare a Traffic Management Plan (TMP) in coordination with Caltrans, cities, and local fire and police departments prior to initiating construction activities that includes the following:
  - Standard practices shall be followed that include scheduling of lane and/or road closures to minimize disruptions.
  - Detour plans shall be prepared for any streets requiring a full closure to provide safe alternate routes to vehicular traffic, pedestrians, and bicyclists during these closures.
  - Traffic control plans shall be prepared to route vehicles, bicyclists, and pedestrians around any partial closures of streets, bicycle facilities, and sidewalks.
  - Information on bus stop relocation and modification to bus routes shall be provided, as applicable. Signs shall be posted to inform transit users in advance of street closures.
  - Construction timings and street closure information shall be available to the public through media alerts, the project's website, and changeable message signs.
  - The nearest local first responders shall be notified, as appropriate, of traffic control measures in the TMP during construction to coordinate emergency response routing.
  - The delivery and pick up of construction material during non-peak travel periods shall be scheduled to the extent possible to reduce the potential of conflicts between construction trucks and commuter traffic.
  - Coordination shall occur with other construction projects in the vicinity.

- 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, California Manual on Uniform Traffic Control Devices, and Metro safety and security programs and standards (i.e., MRDC and Metro Systemwide Station Design Standards Policy). The construction TMP will be prepared in compliance with these standards.
- Financial assistance may be provided to small businesses along the proposed alignments, the design option, and the MSF that are directly affected by construction activities through grants to cover certain fixed operating expenses such as utilities, rent or mortgage, and insurance.
- Metro shall coordinate with the Hollywood Bowl to maintain circulation and access to the Hollywood Bowl during construction of the optional Hollywood Bowl station.

3.11.7 IMPACT EVALUATION AND MITIGATION MEASURES

This analysis presents the construction and operational impacts for hazards and hazardous materials, as well as any applicable mitigation measures associated with KNE. A summary of the impact conclusions and applicable mitigation measures is found in Table 3.11-8 in Section 3.11.7.9.

3.11.7.1 IMPACT HAZ-1: HAZARDS FROM ROUTINE TRANSPORT, USE, OR DISPOSAL OF HAZARDOUS MATERIALS

Impact HAZ-1: Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

3.11.7.1.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.11.7.1.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE San Vicente–Fairfax Alignment would temporarily increase the regional transport, use, and disposal of hazardous materials and petroleum products such as diesel fuel, lubricants, paints and solvents, and cement products containing strong basic or acidic chemicals. Some of these materials would be temporarily stored on site, but storage would be consistent with the guidelines established by manufacturers' recommendations and with the requirements of state and federal law. In addition, hazardous waste generated during construction could include welding materials, fuel and lubricant containers, paint and solvent containers, and cement products.

Demolition of structures containing asbestos and lead-based materials requires specialized procedures and equipment and appropriately certified personnel. Structures intended for demolition would be surveyed for ACMs and lead during the property acquisition phase. A site-specific Phase I ESA would be conducted for each property to be acquired, and if the property has a structure that needs to be demolished, a hazardous materials building survey (including ACM and LBP evaluations) would be undertaken. For structures with ACM or LBP identified, a demolition plan would be prepared specifying how to appropriately contain, remove, and dispose of the asbestos- and lead-containing material while meeting regulatory requirements and BMPs to protect human health and the environment.

Construction procedures would be established through preparation of a material management plan to limit the potential release of subsurface contaminants, reduce risks associated with disturbing undocumented contaminated soil, and reduce the risk of hazardous material spills during transport. Details and content of the plan would be specified in the contract documents; the plan would be prepared prior to initiation of construction activities. Contaminated soil and/or groundwater or other wastes would be appropriately containerized for safe transport to a licensed disposal facility. Each load of waste or contaminated material would be manifested for tracking purposes and transported to the appropriate disposal facility by a licensed waste hauler in accordance with the federal, state, and local regulatory requirements.

Construction of the alignment and stations would be required to comply with existing federal, state, and local regulations pertaining to routine transport, use, or disposal of hazardous materials and would not create a significant hazard to the public or the environment. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.11.7.1.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE San Vicente–Fairfax Alignment would involve the transport, use, and disposal of small quantities of hazardous materials such as lubricants, fuel, paints and solvents, or caulk associated with the routine maintenance of stations and other facilities. Maintenance vehicles used for regular inspections and equipment used for occasional repairs or reinforcements would also employ potentially hazardous materials such as paints, fuels, and lubricants. Any hazardous materials or wastes generated during operations would be managed and disposed of in accordance with local, state, and federal regulations. Each load of waste or contaminated material would be manifested for tracking purposes and transported to the appropriate disposal facility by a licensed waste hauler and, as a result, the alignment would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.11.7.1.2 KNE FAIRFAX ALIGNMENT

3.11.7.1.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE Fairfax Alignment would temporarily increase the regional transport, use, and disposal of hazardous materials and petroleum products such as diesel fuel, lubricants, paints and solvents, and cement products containing strong basic or acidic chemicals. Some of these materials would be temporarily stored on site, but storage would be consistent with the guidelines established by manufacturers' recommendations and with the requirements of state and federal law. In addition, hazardous waste generated during construction could include welding materials, fuel and lubricant containers, paint and solvent containers, and cement products.

Demolition of structures containing asbestos and lead-based materials requires specialized procedures and equipment and appropriately certified personnel. Structures intended for demolition would be surveyed for ACMs and lead during the property acquisition phase. A site-specific Phase I ESA would be conducted for each property to be acquired, and if the property has a structure that needs to be

demolished, a hazardous materials building survey (including ACM and LBP evaluations) would be undertaken. For structures with ACM or LBP identified, a demolition plan would be prepared specifying how to appropriately contain, remove, and dispose of the asbestos- and lead-containing material while meeting regulatory requirements and BMPs to protect human health and the environment.

Construction procedures would be established through preparation of a material management plan to limit the potential release of subsurface contaminants, reduce risks associated with disturbing undocumented contaminated soil, and reduce the risk of hazardous material spills during transport. Details and content of the plan would be specified in the contract documents; the plan would be prepared prior to initiation of construction activities. Contaminated soil and/or groundwater or other wastes would be appropriately containerized for safe transport to a licensed disposal facility. Each load of waste or contaminated material would be manifested for tracking purposes and transported to the appropriate disposal facility by a licensed waste hauler in accordance with the federal, state, and local regulatory requirements.

Construction of the alignment and stations would be required to comply with existing federal, state, and local regulations pertaining to routine transport, use, or disposal of hazardous materials and would not create a significant hazard to the public or the environment. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.11.7.1.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE Fairfax Alignment would involve the transport, use, and disposal of small quantities of hazardous materials such as lubricants, fuel, paints and solvents, or caulk associated with the routine maintenance of stations and other facilities. Maintenance vehicles used for regular inspections and equipment used for occasional repairs or reinforcements would also employ potentially hazardous materials such as paints, fuels, and lubricants. Any hazardous materials or wastes generated during operations would be managed and disposed of in accordance with local, state, and federal regulations. Each load of waste or contaminated material would be manifested for tracking purposes and transported to the appropriate disposal facility by a licensed waste hauler and, as a result, the alignment would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.11.7.1.3 KNE LA BREA ALIGNMENT

3.11.7.1.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE La Brea Alignment would temporarily increase the regional transport, use, and disposal of hazardous materials and petroleum products such as diesel fuel, lubricants, paints and solvents, and cement products containing strong basic or acidic chemicals. Some of these materials would be temporarily stored on site, but storage would be consistent with the guidelines established by manufacturers' recommendations and with the requirements of state and federal law. In addition, hazardous waste generated during construction could include welding materials, fuel and lubricant containers, paint and solvent containers, and cement products.

Demolition of structures containing asbestos and lead-based materials requires specialized procedures and equipment and appropriately certified personnel. Structures intended for demolition would be surveyed for ACMs and lead during the property acquisition phase. A site-specific Phase I ESA would be conducted for each property to be acquired, and if the property has a structure that needs to be demolished, a hazardous materials building survey (including ACM and LBP evaluations) would be undertaken. For structures with ACM or LBP identified, a demolition plan would be prepared specifying how to appropriately contain, remove, and dispose of the asbestos- and lead-containing material while meeting regulatory requirements and BMPs to protect human health and the environment.

Construction procedures would be established through preparation of a material management plan to limit the potential release of subsurface contaminants, reduce risks associated with disturbing undocumented contaminated soil, and reduce the risk of hazardous material spills during transport. Details and content of the plan would be specified in the contract documents; the plan would be prepared prior to initiation of construction activities. Contaminated soil and/or groundwater or other wastes would be appropriately containerized for safe transport to a licensed disposal facility. Each load of waste or contaminated material would be manifested for tracking purposes and transported to the appropriate disposal facility by a licensed waste hauler in accordance with the federal, state, and local regulatory requirements.

Construction of the alignment and stations would be required to comply with existing federal, state, and local regulations pertaining to routine transport, use, or disposal of hazardous materials and would not create a significant hazard to the public or the environment. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.11.7.1.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE La Brea Alignment would involve the transport, use, and disposal of small quantities of hazardous materials such as lubricants, fuel, paints and solvents, or caulk associated with the routine maintenance of stations and other facilities. Maintenance vehicles used for regular inspections and equipment used for occasional repairs or reinforcements would also employ potentially hazardous materials such as paints, fuels, and lubricants. Any hazardous materials or wastes generated during operations would be managed and disposed of in accordance with local, state, and federal regulations. Each load of waste or contaminated material would be manifested for tracking purposes and transported to the appropriate disposal facility by a licensed waste hauler and as a result the alignment would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.11.7.1.4 HOLLYWOOD BOWL DESIGN OPTION

3.11.7.1.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the Hollywood Bowl Design Option would temporarily increase the regional transport, use, and disposal of hazardous materials and petroleum products such as diesel fuel, lubricants, paints and solvents, and cement products containing strong basic or acidic

chemicals. Some of these materials would be temporarily stored on site, but storage would be consistent with the guidelines established by manufacturers' recommendations and with the requirements of state and federal law. In addition, hazardous waste generated during construction could include welding materials, fuel and lubricant containers, paint and solvent containers, and cement products.

Demolition of structures containing asbestos and lead-based materials requires specialized procedures and equipment and appropriately certified personnel. Structures intended for demolition would be surveyed for ACMs and lead during the property acquisition phase. A site-specific Phase I ESA would be conducted for each property to be acquired, and if the property has a structure that needs to be demolished, a hazardous materials building survey (including ACM and LBP evaluations) would be undertaken. For structures with ACM or LBP identified, a demolition plan would be prepared specifying how to appropriately contain, remove, and dispose of the asbestos- and lead-containing material while meeting regulatory requirements and BMPs to protect human health and the environment.

Construction procedures would be established through preparation of a material management plan to limit the potential release of subsurface contaminants, reduce risks associated with disturbing undocumented contaminated soil, and reduce the risk of hazardous material spills during transport. Details and content of the plan would be specified in the contract documents; the plan would be prepared prior to initiation of construction activities. Contaminated soil and/or groundwater or other wastes would be appropriately containerized for safe transport to a licensed disposal facility. Each load of waste or contaminated material would be manifested for tracking purposes and transported to the appropriate disposal facility by a licensed waste hauler in accordance with the federal, state, and local regulatory requirements.

Construction of the design option and station would be required to comply with existing federal, state, and local regulations pertaining to routine transport, use, or disposal of hazardous materials and would not create a significant hazard to the public or the environment. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.11.7.1.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the Hollywood Bowl Design Option would involve the transport, use, and disposal of small quantities of hazardous materials such as lubricants, fuel, paints and solvents, or caulk associated with the routine maintenance of station and other facilities. Maintenance vehicles used for regular inspections and equipment used for occasional repairs or reinforcements would also employ potentially hazardous materials such as paints, fuels, and lubricants. Any hazardous materials or wastes generated during operations would be managed and disposed of in accordance with local, state, and federal regulations. Each load of waste or contaminated material would be manifested for tracking purposes and transported to the appropriate disposal facility by a licensed waste hauler and, as a result, the design option would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.11.7.1.5 MAINTENANCE AND STORAGE FACILITY

3.11.7.1.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the MSF would temporarily increase the regional transport, use, and disposal of hazardous materials and petroleum products such as diesel fuel, lubricants, paints and solvents, and cement products containing strong basic or acidic chemicals. Some of these materials would be temporarily stored on site, but storage would be consistent with the guidelines established by manufacturers' recommendations and with the requirements of state and federal law. In addition, hazardous waste generated during construction could include welding materials, fuel and lubricant containers, paint and solvent containers, and cement products.

Demolition of structures containing asbestos and lead-based materials requires specialized procedures and equipment and appropriately certified personnel. Structures intended for demolition would be surveyed for ACMs and lead during the property acquisition phase. A site-specific Phase I ESA would be conducted for each property to be acquired, and if the property has a structure that needs to be demolished, a hazardous materials building survey (including ACM and LBP evaluations) would be undertaken. For structures with ACM or LBP identified, a demolition plan would be prepared specifying how to appropriately contain, remove, and dispose of the asbestos- and lead-containing material while meeting regulatory requirements and BMPs to protect human health and the environment.

Construction procedures would be established through preparation of a material management plan to limit the potential release of subsurface contaminants, reduce risks associated with disturbing undocumented contaminated soil, and reduce the risk of hazardous material spills during transport. Details and content of the plan would be specified in the contract documents; the plan would be prepared prior to initiation of construction activities. Contaminated soil and/or groundwater or other wastes would be appropriately containerized for safe transport to a licensed disposal facility. Each load of waste or contaminated material would be manifested for tracking purposes and transported to the appropriate disposal facility by a licensed waste hauler in accordance with the federal, state, and local regulatory requirements.

Construction of the MSF would be required to comply with existing federal, state, and local regulations pertaining to routine transport, use, or disposal of hazardous materials and would not create a significant hazard to the public or the environment. Therefore, the MSF would have a less than significant impact during construction.

3.11.7.1.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the MSF would involve the transport, use, and disposal of larger quantities of hazardous materials than for the alignments and design option. Maintenance, servicing, and daily cleaning of the light rail vehicles would occur at the MSF. The maintenance and repair activities may require a wide variety of substances, including cleaning chemicals, degreasers, fuels, lubricants, paints, and caulk. Materials may also be generated from these activities in greater quantities compared to the alignments and design option, and would include spent containers for the aforementioned substances, used filters, and cleaning cloths contaminated with chemical residues. Any

hazardous materials or wastes generated during operations would be managed and disposed in accordance with local, state, and federal regulations. Each load of waste or contaminated material would be manifested for tracking purposes and transported to the appropriate disposal facility by a licensed waste hauler and, as a result, the MSF would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Therefore, the MSF would have a less than significant impact during operation.

3.11.7.2 IMPACT HAZ-2: HAZARDS DUE TO UPSET AND ACCIDENT CONDITIONS THAT INVOLVE THE RELEASE OF HAZARDOUS MATERIALS

Impact HAZ-2: Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

3.11.7.2.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.11.7.2.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE San Vicente–Fairfax Alignment would temporarily increase the regional transport, use, and disposal of hazardous materials and petroleum products, such as gasoline and diesel fuel, compressed gases, lubricants, paints, solvents, and cement products containing strong basic or acidic chemicals, as well as hazardous waste generated during construction. In addition, structures that require demolition may contain ACM and LBP that would require transport and disposal. Hazardous materials could be released into the environment if there is an accident or if existing contamination is exposed during construction.

Some of the hazardous materials identified above would be temporarily stored on site, but storage would be limited to specific areas. The storage of these materials would comply with the project guidelines established by Metro's specifications as part of project design and with state and federal regulatory requirements.

Off-site accidents could occur during transport of the hazardous materials listed above, and other material, or during transport of contaminated soil or groundwater from the cleanup of existing contaminated sites. Transport of these materials would expose individuals and the environment to off-site risks. These materials would be appropriately containerized for safe transport to a licensed disposal facility. Each load of waste or contaminated material would be manifested for tracking purposes and transported to the appropriate disposal facility by a licensed waste hauler in accordance with federal, state, and local regulatory requirements. Any accidents or spills that involve hazardous materials or wastes would be promptly cleaned up in accordance with project-specific spill response and material management plans. Details and content of the plans would be specified in the contract documents; the plans would be prepared prior to initiation of construction activities.

Construction of the KNE San Vicente–Fairfax Alignment would be required to comply with existing federal, state, and local regulations pertaining to hazardous materials, as well as Metro's guidelines. The alignment would not create a significant hazard to the public or the environment through reasonably

foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.11.7.2.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE San Vicente–Fairfax Alignment would involve the occasional transport, use, and disposal of small quantities of hazardous materials such as lubricants, fuel, paints, solvents, and caulk associated with the routine maintenance of stations and other facilities. Maintenance vehicles used for regular inspections and equipment used for occasional repairs or reinforcements would employ small quantities of potentially hazardous materials such as paints, fuels, and lubricants. The light rail vehicles would be electric and would therefore carry no fuel, but minimal other hazardous products such as hydraulic fluids or coolants may be on board. Any hazardous materials or wastes generated during operations would be appropriately containerized for safe transport to a licensed disposal facility. Each load of waste would be manifested for tracking purposes and transported to the appropriate disposal facility by a licensed waste hauler in accordance with federal, state, and local regulatory requirements. Because of the infrequent nature of transport of these materials during the operations phase of the project and the small quantities involved, the potential for a major hazardous materials incident or accident would be negligible. Any accidents or spills that involve hazardous materials or wastes would be promptly cleaned up in accordance with project-specific spill response and material management plans. Details and content of the plans would be specified in the contract documents; the plans would be prepared prior to initiation of construction activities. The alignment would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.11.7.2.2 KNE FAIRFAX ALIGNMENT

3.11.7.2.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE Fairfax Alignment would temporarily increase the regional transport, use, and disposal of hazardous materials and petroleum products, such as gasoline and diesel fuel, compressed gases, lubricants, paints, solvents, and cement products containing strong basic or acidic chemicals, as well as hazardous waste generated during construction. In addition, structures that require demolition may contain ACM and LBP that would require transport and disposal. Hazardous materials could be released into the environment if there is an accident or if existing contamination is exposed during construction.

Some of the hazardous materials identified above would be temporarily stored on site, but storage would be limited to specific areas. The storage of these materials would comply with the project guidelines established by Metro's specifications as part of project design and with state and federal regulatory requirements.

Off-site accidents could occur during transport of the hazardous materials listed above, and other material, or during transport of contaminated soil or groundwater from the cleanup of existing

contaminated sites. Transport of these materials would expose individuals and the environment to off-site risks. These materials would be appropriately containerized for safe transport to a licensed disposal facility. Each load of waste or contaminated material would be manifested for tracking purposes and transported to the appropriate disposal facility by a licensed waste hauler in accordance with federal, state, and local regulatory requirements. Any accidents or spills that involve hazardous materials or wastes would be promptly cleaned up in accordance with project-specific spill response and material management plans. Details and content of the plans would be specified in the contract documents; the plans would be prepared prior to initiation of construction activities.

Construction of the KNE Fairfax Alignment would be required to comply with existing federal, state, and local regulations pertaining to hazardous materials, as well as Metro's guidelines. The alignment would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.11.7.2.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE Fairfax Alignment would involve the occasional transport, use, and disposal of small quantities of hazardous materials such as lubricants, fuel, paints, solvents, and caulk associated with the routine maintenance of stations and other facilities. Maintenance vehicles used for regular inspections and equipment used for occasional repairs or reinforcements would employ small quantities of potentially hazardous materials such as paints, fuels, and lubricants. The light rail vehicles would be electric and would therefore carry no fuel, but minimal other hazardous products such as hydraulic fluids or coolants may be on board. Any hazardous materials or wastes generated during operations would be appropriately containerized for safe transport to a licensed disposal facility. Each load of waste would be manifested for tracking purposes and transported to the appropriate disposal facility by a licensed waste hauler in accordance with federal, state, and local regulatory requirements. Because of the infrequent nature of transport of these materials during the operations phase of the project and the small quantities involved, the potential for a major hazardous materials incident or accident would be negligible. Any accidents or spills that involve hazardous materials or wastes would be promptly cleaned up in accordance with project-specific spill response and material management plans. Details and content of the plans would be specified in the contract documents; the plans would be prepared prior to initiation of construction activities. The alignment would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.11.7.2.3 KNE LA BREA ALIGNMENT

3.11.7.2.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE La Brea Alignment would temporarily increase the regional transport, use, and disposal of hazardous materials and petroleum products, such as gasoline and diesel fuel, compressed gases, lubricants, paints, solvents, and cement products containing strong

basic or acidic chemicals, as well as hazardous waste generated during construction. In addition, structures that require demolition may contain ACM and LBP that would require transport and disposal. Hazardous materials could be released into the environment if there is an accident or if existing contamination is exposed during construction.

Some of the hazardous materials identified above would be temporarily stored on site, but storage would be limited to specific areas. The storage of these materials would comply with the project guidelines established by Metro's specifications as part of project design and with state and federal regulatory requirements.

Off-site accidents could occur during transport of the hazardous materials listed above, and other material, or during transport of contaminated soil or groundwater from the cleanup of existing contaminated sites. Transport of these materials would expose individuals and the environment to off-site risks. These materials would be appropriately containerized for safe transport to a licensed disposal facility. Each load of waste or contaminated material would be manifested for tracking purposes and transported to the appropriate disposal facility by a licensed waste hauler in accordance with federal, state, and local regulatory requirements. Any accidents or spills that involve hazardous materials or wastes would be promptly cleaned up in accordance with project-specific spill response and material management plans. Details and content of the plans would be specified in the contract documents; the plans would be prepared prior to initiation of construction activities.

Construction of the KNE La Brea Alignment would be required to comply with existing federal, state, and local regulations pertaining to hazardous materials, as well as Metro's guidelines. The alignment would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.11.7.2.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE La Brea Alignment would involve the occasional transport, use, and disposal of small quantities of hazardous materials such as lubricants, fuel, paints, solvents, and caulk associated with the routine maintenance of stations and other facilities. Maintenance vehicles used for regular inspections and equipment used for occasional repairs or reinforcements would employ small quantities of potentially hazardous materials such as paints, fuels, and lubricants. The light rail vehicles would be electric and would therefore carry no fuel, but minimal other hazardous products such as hydraulic fluids or coolants may be on board. Any hazardous materials or wastes generated during operations would be appropriately containerized for safe transport to a licensed disposal facility. Each load of waste would be manifested for tracking purposes and transported to the appropriate disposal facility by a licensed waste hauler in accordance with federal, state, and local regulatory requirements. Because of the infrequent nature of transport of these materials during the operations phase of the project and the small quantities involved, the potential for a major hazardous materials incident or accident would be negligible. Any accidents or spills that involve hazardous materials or wastes would be promptly cleaned up in accordance with project-specific spill response and material management plans. Details and content of the plans would be specified in the contract documents; the

plans would be prepared prior to initiation of construction activities. The alignment would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.11.7.2.4 HOLLYWOOD BOWL DESIGN OPTION

3.11.7.2.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the Hollywood Bowl Design Option would temporarily increase the regional transport, use, and disposal of hazardous materials and petroleum products, such as gasoline and diesel fuel, compressed gases, lubricants, paints, solvents, and cement products containing strong basic or acidic chemicals, as well as hazardous waste generated during construction. In addition, structures that require demolition may contain ACM and LBP that would require transport and disposal. Hazardous materials could be released into the environment if there is an accident or if existing contamination is exposed during construction.

Some of the hazardous materials identified above would be temporarily stored on site, but storage would be limited to specific areas. The storage of these materials would comply with the project guidelines established by Metro's specifications as part of project design and with state and federal regulatory requirements.

Off-site accidents could occur during transport of the hazardous materials listed above, and other material, or during transport of contaminated soil or groundwater from the cleanup of existing contaminated sites. Transport of these materials would expose individuals and the environment to off-site risks. These materials would be appropriately containerized for safe transport to a licensed disposal facility. Each load of waste or contaminated material would be manifested for tracking purposes and transported to the appropriate disposal facility by a licensed waste hauler in accordance with federal, state, and local regulatory requirements. Any accidents or spills that involve hazardous materials or wastes would be promptly cleaned up in accordance with project-specific spill response and material management plans. Details and content of the plans would be specified in the contract documents; the plans would be prepared prior to initiation of construction activities.

Construction of the Hollywood Bowl Design Option would be required to comply with existing federal, state, and local regulations pertaining to hazardous materials, as well as Metro's guidelines. The design option would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.11.7.2.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the Hollywood Bowl Design Option would involve the occasional transport, use, and disposal of small quantities of hazardous materials such as lubricants, fuel, paints, solvents, and caulk associated with the routine maintenance of stations and other facilities.

Maintenance vehicles used for regular inspections and equipment used for occasional repairs or reinforcements would employ small quantities of potentially hazardous materials such as paints, fuels, and lubricants. The light rail vehicles would be electric and would therefore carry no fuel, but minimal other hazardous products such as hydraulic fluids or coolants may be on board. Any hazardous materials or wastes generated during operations would be appropriately containerized for safe transport to a licensed disposal facility. Each load of waste would be manifested for tracking purposes and transported to the appropriate disposal facility by a licensed waste hauler in accordance with federal, state, and local regulatory requirements. Because of the infrequent nature of transport of these materials during the operations phase of the project and the small quantities involved, the potential for a major hazardous materials incident or accident would be negligible. Any accidents or spills that involve hazardous materials or wastes would be promptly cleaned up in accordance with project-specific spill response and material management plans. Details and content of the plans would be specified in the contract documents; the plans would be prepared prior to initiation of construction activities. The design option would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.11.7.2.5 MAINTENANCE AND STORAGE FACILITY

3.11.7.2.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the MSF would temporarily increase the regional transport, use, and disposal of hazardous materials and petroleum products, such as gasoline and diesel fuel, compressed gases, lubricants, paints, solvents, and cement products containing strong basic or acidic chemicals, as well as hazardous waste generated during construction. In addition, structures that require demolition may contain ACM and LBP that would require transport and disposal. Hazardous materials could be released into the environment if there is an accident or if existing contamination is exposed during construction.

Some of the hazardous materials identified above would be temporarily stored on site, but storage would be limited to specific areas. The storage of these materials would comply with the project guidelines established by Metro's specifications as part of project design and with state and federal regulatory requirements.

Off-site accidents could occur during transport of the hazardous materials listed above, and other material, or during transport of contaminated soil or groundwater from the cleanup of existing contaminated sites. Transport of these materials would expose individuals and the environment to off-site risks. These materials would be appropriately containerized for safe transport to a licensed disposal facility. Each load of waste or contaminated material would be manifested for tracking purposes and transported to the appropriate disposal facility by a licensed waste hauler in accordance with federal, state, and local regulatory requirements. Any accidents or spills that involve hazardous materials or wastes would be promptly cleaned up in accordance with project-specific spill response and material management plans. Details and content of the plans would be specified in the contract documents; the plans would be prepared prior to initiation of construction activities.

Construction of the MSF would be required to comply with existing federal, state, and local regulations pertaining to hazardous materials, as well as Metro's guidelines. The MSF would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Therefore, the MSF would have a less than significant impact during construction.

3.11.7.2.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the MSF would involve storage, transport, use, and disposal of hazardous materials such as lubricants, fuel, paints, solvents, and caulk associated with the maintenance of rail vehicles, stations, and other facilities. In addition, the light rail vehicles stored and maintained at the site would be electric and would therefore carry no fuel, but minimal other hazardous products such as hydraulic fluids or coolants may be on board.

Hazardous materials at the MSF would be stored and used consistent with the guidelines established by manufacturers' recommendations and with the requirements of state and federal law. Hazardous materials and wastes generated during operation of the MSF would be appropriately containerized for safe transport to a licensed disposal facility. Each load of waste would be manifested for tracking purposes and transported to the appropriate disposal facility by a licensed waste hauler in accordance with federal, state, and local regulatory requirements. Because of the infrequent nature of transport of these materials during the operations phase of the project and the small quantities involved, the potential for a major hazardous materials incident or accident would be negligible. Any accidents or spills that involve hazardous materials or wastes would be promptly cleaned up in accordance with project-specific spill response and material management plans. Details and content of the plans would be specified in the contract documents; the plans would be prepared prior to initiation of construction activities.

As described above, operation of the MSF would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Therefore, the MSF would have a less than significant impact during operation.

3.11.7.3 IMPACT HAZ-3: HAZARDOUS EMISSIONS, MATERIALS, OR WASTE WITHIN 0.25 MILE OF A SCHOOL

Impact HAZ-3: Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

3.11.7.3.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.11.7.3.1.1 CONSTRUCTION IMPACTS

Significant Impact. There are 26 educational facilities within 0.25 mile of the KNE San Vicente–Fairfax Alignment. There would be a temporary increase in the regional transport, use, and disposal of hazardous materials and petroleum products commonly used during construction in the RSA, in some cases within 0.25 mile of one or more schools. Such products include oils, fuels, and additives; lubricants; compressed

gases; paints, varnishes, solvents, adhesives, and glues; and cement products containing strong basic or acidic chemicals as part of the construction of the tunnels, stations, and other project components. Additionally, demolition of structures could release asbestos, lead, and other contaminants into the environment. Schools near areas that require building demolition, substantial excavation, and soil disturbance would have the highest risks of exposure to hazardous materials.

During construction, hazardous materials would be stored and transported in accordance with federal, state, and local regulations regarding the transport, use, and storage of hazardous materials. Compliance with these regulations would minimize the potential for a release of hazardous materials that could impact schools.

Prior to construction that involves demolition, the contractor would prepare building-specific demolition plans for the safe dismantling and removal of building components and debris. The demolition plans would include procedures for lead and asbestos abatement. In addition, prior to construction, the contractor would provide Metro with a hazardous materials and waste plan describing responsible parties and procedures for hazardous materials transport, containment, and storage, including BMPs, that would be implemented during construction. Details and content of the plans would be specified in the contract documents; the plans would be prepared prior to initiation of construction activities.

Proper implementation of project-specific materials storage procedures would limit the extent of any spilled material within a storage area to that storage facility. Furthermore, the contractor would develop an environmental management plan to identify, track, and document the locations of hazardous materials and to communicate practices required for proper handling, storage, and transport of hazardous materials.

CARB requires air monitoring for construction projects, contaminated soil and groundwater remediation projects, and demolition projects. On-site monitoring regulations are summarized at the CARB website[4] for the following airborne contaminants, which are expected to be produced as part of this project:

- Visible emissions
- Fugitive dust
- Particulate matter
- Vehicle and equipment emissions
- Odor
- Organic solvents
- Storage of organic liquids
- Transfer of gasoline and diesel fuel to vehicles
- Transfer of gasoline and diesel fuel to fuel storage tanks

[4] https://ww2.arb.ca.gov/

Examples of engineering controls and BMPs that would be incorporated in design to contain any emissions that might affect a school within 0.25 mile of construction activities include emission control for diesel off-road equipment and diesel generators; dust control through wetting or covering; short- and long-term ambient air quality monitoring in neighborhoods near and downwind from the construction or maintenance sites; and field olfactometry measuring and quantifying odor strength in the ambient air. All heavy-duty off-road construction diesel equipment used during construction would meet the USEPA Tier IV emissions requirements (40 CFR 1039.101) of the Clean Air Act. In addition, toxic air contaminants from products typically used during construction (e.g., compressed gases, oils and lubricants, fuels and additives, paints and varnishes, adhesives, and glues) are expected to be minimal.

As described above, hazardous materials and wastes could be released in proximity to schools in quantities greater than the state threshold, potentially exposing students and faculty to hazardous materials or wastes through skin contact, ingestion, or inhalation, and there could be environmental impacts on school grounds through contact with released hazardous materials or wastes. Hazardous materials would be used in a manner consistent with typical construction site procedures. Metro standards and other regulations also require management plans to transport and prevent spills of hazardous materials associated with construction. Although Metro standards would require materials to be selected to minimize impacts to the public and the environment, and environmental management plans would be used to track and document the location and types of hazardous materials used so they are properly stored and transported, these requirements would not eliminate the possibility of a release of hazardous materials in quantities greater than the state thresholds identified in subdivision (l) of Section 25532 of the Health and Safety Code near schools within the RSA. Therefore, the KNE San Vicente–Fairfax Alignment would have a significant impact during construction, and mitigation would be required.

3.11.7.3.1.2 OPERATIONAL IMPACTS

Significant Impact. Operation of the KNE San Vicente–Fairfax Alignment would involve the transport, use, and disposal of small quantities of hazardous materials such as lubricants, fuel, paints and solvents, or caulk associated with the routine maintenance of stations and other facilities. Maintenance vehicles used for regular inspections and equipment used for occasional repairs or reinforcements would employ potentially hazardous materials such as paints, fuels, and lubricants. There are 26 educational facilities in the RSA of the KNE San Vicente–Fairfax Alignment, and operation of the alignment could result in hazardous emissions or require hazardous or acutely hazardous materials, substances, or waste to be handled in proximity to one or more of these schools.

Hazardous materials and wastes could be released in proximity to schools in quantities greater than the state threshold, potentially exposing students and faculty to hazardous materials or wastes through skin contact, ingestion, or inhalation, and there could be environmental impacts on school grounds through contact with released hazardous materials or wastes. Although Metro standards would require materials to be selected to minimize impacts to the public and the environment, and environmental management plans would be used to track and document the location and types of hazardous materials used so they are properly stored and transported, these requirements would not eliminate the possibility of a release of hazardous materials in quantities greater than the state thresholds identified in subdivision (l) of Section

25532 of the Health and Safety Code near schools within the RSA. Therefore, the KNE San Vicente–Fairfax Alignment would have a significant impact during operation, and mitigation would be required.

3.11.7.3.2 KNE FAIRFAX ALIGNMENT

3.11.7.3.2.1 CONSTRUCTION IMPACTS

Significant Impact. There are 22 educational facilities within 0.25 mile of the KNE Fairfax Alignment. There would be a temporary increase in the regional transport, use, and disposal of hazardous materials and petroleum products commonly used during construction in the RSA, in some cases within 0.25 mile of one or more schools. Such products include oils, fuels, and additives; lubricants; compressed gases; paints, varnishes, solvents, adhesives, and glues; and cement products containing strong basic or acidic chemicals as part of the construction of the tunnels, stations, and other project components. Additionally, demolition of structures could release asbestos, lead, and other contaminants into the environment. Schools near areas that require building demolition, substantial excavation, and soil disturbance would have the highest risks of exposure to hazardous materials.

During construction, hazardous materials would be stored and transported in accordance with federal, state, and local regulations regarding the transport, use, and storage of hazardous materials. Compliance with these regulations would minimize the potential for a release of hazardous materials that could impact schools.

Prior to construction that involves demolition, the contractor would prepare building-specific demolition plans for the safe dismantling and removal of building components and debris. The demolition plans would include procedures for lead and asbestos abatement. In addition, prior to construction, the contractor would provide Metro with a hazardous materials and waste plan describing responsible parties and procedures for hazardous materials transport, containment, and storage, including BMPs, that would be implemented during construction. Details and content of the plans would be specified in the contract documents; the plans would be prepared prior to initiation of construction activities.

Proper implementation of project-specific materials storage procedures would limit the extent of any spilled material within a storage area to that storage facility. Furthermore, the contractor would develop an environmental management plan to identify, track, and document the locations of hazardous materials and to communicate practices required for proper handling, storage, and transport of hazardous materials.

CARB requires air monitoring for construction projects, contaminated soil and groundwater remediation projects, and demolition projects. On-site monitoring regulations are summarized at the CARB website[5] for the following airborne contaminants, which are expected to be produced as part of this project:

- Visible emissions
- Fugitive dust
- Particulate matter

[5] https://ww2.arb.ca.gov/

- Vehicle and equipment emissions
- Odor
- Organic solvents
- Storage of organic liquids
- Transfer of gasoline and diesel fuel to vehicles
- Transfer of gasoline and diesel fuel to fuel storage tanks

Examples of engineering controls and BMPs that would be incorporated in design to contain any emissions that might affect a school within 0.25 mile of construction activities include emission control for diesel off-road equipment and diesel generators; dust control through wetting or covering; short- and long-term ambient air quality monitoring in neighborhoods near and downwind from the construction or maintenance sites; and field olfactometry measuring and quantifying odor strength in the ambient air. All heavy-duty off-road construction diesel equipment used during construction would meet the USEPA Tier IV emissions requirements (40 CFR 1039.101) of the Clean Air Act. In addition, toxic air contaminants from products typically used during construction (e.g., compressed gases, oils and lubricants, fuels and additives, paints and varnishes, adhesives, and glues) are expected to be minimal.

As described above, hazardous materials and wastes could be released in proximity to schools in quantities greater than the state threshold, potentially exposing students and faculty to hazardous materials or wastes through skin contact, ingestion, or inhalation, and there could be environmental impacts on school grounds through contact with released hazardous materials or wastes. Hazardous materials would be used in a manner consistent with typical construction site procedures. Metro standards and other regulations also require management plans to transport and prevent spills of hazardous materials associated with construction. Although Metro standards would require materials to be selected to minimize impacts to the public and the environment, and environmental management plans would be used to track and document the location and types of hazardous materials used so they are properly stored and transported, these requirements would not eliminate the possibility of a release of hazardous materials in quantities greater than the state thresholds identified in subdivision (l) of Section 25532 of the Health and Safety Code near schools within the RSA. Therefore, the KNE Fairfax Alignment would have a significant impact during construction, and mitigation would be required.

3.11.7.3.2.2 OPERATIONAL IMPACTS

Significant Impact. Operation of the KNE Fairfax Alignment would involve the transport, use, and disposal of small quantities of hazardous materials such as lubricants, fuel, paints and solvents, or caulk associated with the routine maintenance of stations and other facilities. Maintenance vehicles used for regular inspections and equipment used for occasional repairs or reinforcements would employ potentially hazardous materials such as paints, fuels, and lubricants. There are 22 educational facilities in the RSA of the KNE Fairfax Alignment, and operation of the alignment could result in hazardous emissions or require hazardous or acutely hazardous materials, substances, or waste to be handled in proximity to one or more of these schools.

Hazardous materials and wastes could be released in proximity to schools in quantities greater than the state threshold, potentially exposing students and faculty to hazardous materials or wastes through skin contact, ingestion, or inhalation, and there could be environmental impacts on school grounds through contact with released hazardous materials or wastes. Although Metro standards would require materials to be selected to minimize impacts to the public and the environment, and environmental management plans would be used to track and document the location and types of hazardous materials used so they are properly stored and transported, these requirements would not eliminate the possibility of a release of hazardous materials in quantities greater than the state thresholds identified in subdivision (l) of Section 25532 of the Health and Safety Code near schools within the RSA. Therefore, the KNE Fairfax Alignment would have a significant impact during operation, and mitigation would be required.

3.11.7.3.3 KNE LA BREA ALIGNMENT

3.11.7.3.3.1 CONSTRUCTION IMPACTS

Significant Impact. There are 20 educational facilities within 0.25 mile of the KNE La Brea Alignment. There would be a temporary increase in the regional transport, use, and disposal of hazardous materials and petroleum products commonly used during construction in the RSA, in some cases within 0.25 mile of one or more schools. Such products include oils, fuels, and additives; lubricants; compressed gases; paints, varnishes, solvents, adhesives, and glues; and cement products containing strong basic or acidic chemicals as part of the construction of the tunnels, stations, and other project components. Additionally, demolition of structures could release asbestos, lead, and other contaminants into the environment. Schools near areas that require building demolition, substantial excavation, and soil disturbance would have the highest risks of exposure to hazardous materials.

During construction, hazardous materials would be stored and transported in accordance with federal, state, and local regulations regarding the transport, use, and storage of hazardous materials. Compliance with these regulations would minimize the potential for a release of hazardous materials that could impact schools.

Prior to construction that involves demolition, the contractor would prepare building-specific demolition plans for the safe dismantling and removal of building components and debris. The demolition plans would include procedures for lead and asbestos abatement. In addition, prior to construction, the contractor would provide Metro with a hazardous materials and waste plan describing responsible parties and procedures for hazardous materials transport, containment, and storage, including BMPs, that would be implemented during construction. Details and content of the plans would be specified in the contract documents; the plans would be prepared prior to initiation of construction activities.

Proper implementation of project-specific materials storage procedures would limit the extent of any spilled material within a storage area to that storage facility. Furthermore, the contractor would develop an environmental management plan to identify, track, and document the locations of hazardous materials and to communicate practices required for proper handling, storage, and transport of hazardous materials.

CARB requires air monitoring for construction projects, contaminated soil and groundwater remediation projects, and demolition projects. On-site monitoring regulations are summarized at the CARB website[6] for the following airborne contaminants, which are expected to be produced as part of this project:

- Visible emissions
- Fugitive dust
- Particulate matter
- Vehicle and equipment emissions
- Odor
- Organic solvents
- Storage of organic liquids
- Transfer of gasoline and diesel fuel to vehicles
- Transfer of gasoline and diesel fuel to fuel storage tanks

Examples of engineering controls and BMPs that would be incorporated in design to contain any emissions that might affect a school within 0.25 mile of construction activities include emission control for diesel off-road equipment and diesel generators; dust control through wetting or covering; short- and long-term ambient air quality monitoring in neighborhoods near and downwind from the construction or maintenance sites; and field olfactometry measuring and quantifying odor strength in the ambient air. All heavy-duty off-road construction diesel equipment used during construction would meet the USEPA Tier IV emissions requirements (40 CFR 1039.101) of the Clean Air Act. In addition, toxic air contaminants from products typically used during construction (e.g., compressed gases, oils and lubricants, fuels and additives, paints and varnishes, adhesives, and glues) are expected to be minimal.

As described above, hazardous materials and wastes could be released in proximity to schools in quantities greater than the state threshold, potentially exposing students and faculty to hazardous materials or wastes through skin contact, ingestion, or inhalation, and there could be environmental impacts on school grounds through contact with released hazardous materials or wastes. Hazardous materials would be used in a manner consistent with typical construction site procedures. Metro standards and other regulations also require management plans to transport and prevent spills of hazardous materials associated with construction. Although Metro standards would require materials to be selected to minimize impacts to the public and the environment, and environmental management plans would be used to track and document the location and types of hazardous materials used so they are properly stored and transported, these requirements would not eliminate the possibility of a release of hazardous materials in quantities greater than the state thresholds identified in subdivision (l) of Section 25532 of the Health and Safety Code near schools within the RSA. Therefore, the KNE La Brea Alignment would have a significant impact during construction, and mitigation would be required.

[6] https://ww2.arb.ca.gov/

3.11.7.3.3.2 OPERATIONAL IMPACTS

Significant Impact. Operation of the KNE La Brea Alignment would involve the transport, use, and disposal of small quantities of hazardous materials such as lubricants, fuel, paints and solvents, or caulk associated with the routine maintenance of stations and other facilities. Maintenance vehicles used for regular inspections and equipment used for occasional repairs or reinforcements would employ potentially hazardous materials such as paints, fuels, and lubricants. There are 20 educational facilities in the RSA of the KNE La Brea Alignment, and operation of the alignment could result in hazardous emissions or require hazardous or acutely hazardous materials, substances, or waste to be handled in proximity to one or more of these schools.

Hazardous materials and wastes could be released in proximity to schools in quantities greater than the state threshold, potentially exposing students and faculty to hazardous materials or wastes through skin contact, ingestion, or inhalation, and there could be environmental impacts on school grounds through contact with released hazardous materials or wastes. Although Metro standards would require materials to be selected to minimize impacts to the public and the environment, and environmental management plans would be used to track and document the location and types of hazardous materials used so they are properly stored and transported, these requirements would not eliminate the possibility of a release of hazardous materials in quantities greater than the state thresholds identified in subdivision (l) of Section 25532 of the Health and Safety Code near schools within the RSA. Therefore, the KNE La Brea Alignment would have a significant impact during operation, and mitigation would be required.

3.11.7.3.4 HOLLYWOOD BOWL DESIGN OPTION

3.11.7.3.4.1 CONSTRUCTION IMPACTS

Significant Impact. There is one educational facility within 0.25 mile of the Hollywood Bowl Design Option. There would be a temporary increase in the regional transport, use, and disposal of hazardous materials and petroleum products commonly used during construction in the RSA, in some cases within 0.25 mile of a school. Such products include oils, fuels, and additives; lubricants; compressed gases; paints, varnishes, solvents, adhesives, and glues; and cement products containing strong basic or acidic chemicals as part of the construction of the tunnels, station, and other project components. The design option would not require demolition of structures, and building-specific demolition plans for the safe dismantling and removal of building components and debris, including procedures for lead and asbestos abatement, would not be required

During construction, hazardous materials would be stored and transported in accordance with federal, state, and local regulations regarding the transport, use, and storage of hazardous materials. Compliance with these regulations would minimize the potential for a release of hazardous materials that could impact a school.

Proper implementation of project-specific materials storage procedures would limit the extent of any spilled material within a storage area to that storage facility. Furthermore, the contractor would develop an environmental management plan to identify, track, and document the locations of hazardous

materials and to communicate practices required for proper handling, storage, and transport of hazardous materials.

CARB requires air monitoring for construction projects, contaminated soil and groundwater remediation projects, and demolition projects. On-site monitoring regulations are summarized at the CARB website[7] for the following airborne contaminants, which are expected to be produced as part of this project:

- Visible emissions
- Fugitive dust
- Particulate matter
- Vehicle and equipment emissions
- Odor
- Organic solvents
- Storage of organic liquids
- Transfer of gasoline and diesel fuel to vehicles
- Transfer of gasoline and diesel fuel to fuel storage tanks

Examples of engineering controls and BMPs that would be incorporated in design to contain any emissions that might affect a school within 0.25 mile of construction activities include emission control for diesel off-road equipment and diesel generators; dust control through wetting or covering; short- and long-term ambient air quality monitoring in neighborhoods near and downwind from the construction or maintenance sites; and field olfactometry measuring and quantifying odor strength in the ambient air. All heavy-duty off-road construction diesel equipment used during construction would meet the USEPA Tier IV emissions requirements (40 CFR 1039.101) of the Clean Air Act. In addition, toxic air contaminants from products typically used during construction (e.g., compressed gases, oils and lubricants, fuels and additives, paints and varnishes, adhesives, and glues) are expected to be minimal.

As described above, hazardous materials and wastes could be released in proximity to a school in quantities greater than the state threshold, potentially exposing students and faculty to hazardous materials or wastes through skin contact, ingestion, or inhalation, and there could be environmental impacts on school grounds through contact with released hazardous materials or wastes. Hazardous materials would be used in a manner consistent with typical construction site procedures. Metro standards and other regulations also require management plans to transport and prevent spills of hazardous materials associated with construction. Although Metro standards would require materials to be selected to minimize impacts to the public and the environment, and environmental management plans would be used to track and document the location and types of hazardous materials used so they are properly stored and transported, these requirements would not eliminate the possibility of a release of hazardous materials in quantities greater than the state thresholds identified in subdivision (l) of Section 25532 of the Health and Safety Code near a school within the RSA. Therefore, the Hollywood Bowl Design Option would have a significant impact during construction, and mitigation would be required.

[7] https://ww2.arb.ca.gov/

3.11.7.3.4.2 OPERATIONAL IMPACTS

Significant Impact. Operation of the Hollywood Bowl Design Option would involve the transport, use, and disposal of small quantities of hazardous materials such as lubricants, fuel, paints, and solvents, or caulk associated with the routine maintenance of the station and other facilities. Maintenance vehicles used for regular inspections and equipment used for occasional repairs or reinforcements would employ potentially hazardous materials such as paints, fuels, and lubricants. There is one educational facility in the RSA, and operation of the design option could result in hazardous emissions or require hazardous or acutely hazardous materials, substances, or waste to be handled in proximity to this school.

Hazardous materials and wastes could be released in proximity to a school in quantities greater than the state threshold, potentially exposing students and faculty to hazardous materials or wastes through skin contact, ingestion, or inhalation, and there could be environmental impacts on school grounds through contact with released hazardous materials or wastes. Although Metro standards would require materials to be selected to minimize impacts to the public and the environment, and environmental management plans would be used to track and document the location and types of hazardous materials used so they are properly stored and transported, these requirements would not eliminate the possibility of a release of hazardous materials in quantities greater than the state thresholds identified in subdivision (l) of Section 25532 of the Health and Safety Code near schools within the RSA. Therefore, the Hollywood Bowl Design Option would have a significant impact during operation, and mitigation would be required.

3.11.7.3.5 MAINTENANCE AND STORAGE FACILITY

3.11.7.3.5.1 CONSTRUCTION IMPACTS

No Impact. There are no schools within 0.25 mile of the MSF. Therefore, there would be no impact during construction.

3.11.7.3.5.2 OPERATIONAL IMPACTS

No Impact. There are no schools within 0.25 mile of the MSF. Therefore, there would be no impact during operation.

3.11.7.4 IMPACT HAZ-4: HAZARDS DUE TO LOCATION ON A HAZARDOUS MATERIALS SITE

Impact HAZ-4: Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?

3.11.7.4.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.11.7.4.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. There are 39 REC sites within the KNE San Vicente–Fairfax Alignment RSA, 17 of which are on the Cortese list. The alignment would also pass through four oil and gas fields, and two other oil and gas fields are within the RSA.

Construction of the alignment and stations would include demolition, earthmoving, and excavation in areas of known or potential soil and/or groundwater contamination. Site-specific Phase I ESAs and hazardous materials building surveys would be conducted during the property acquisition phase to help ensure that potential contamination is identified and addressed, and that wastes are properly transported and disposed prior to construction. Contractors would comply with State Water Resources Control Board (SWRCB) requirements to help ensure the proper transport, labeling, containment, cover, and other BMPs for storage of hazardous materials during construction. A hazardous materials plan would be created and implemented to help ensure proper handling of hazardous materials. Details and content of the plan would be specified in the contract documents; the plan would be prepared prior to initiation of construction activities.

Soil to be excavated from potentially contaminated properties, including Cortese list sites, or within oil and gas fields, may need to be tested in advance of or during construction to identify whether the soils are contaminated, and if so, how they may be handled and/or remediated. If dewatering is necessary, the extracted groundwater may also need to be tested prior to discharge or disposal.

Construction activities within the six oil and gas fields in the RSA could disturb naturally occurring subsurface petroleum, which could result in spill conditions related to the naturally occurring petroleum. There would be a risk of explosions or spills related to active or idle oil and gas wells and related infrastructure encountered during construction. Any spills would be addressed in accordance with project-specific spill response and material management plans. Details and content of the plans would be specified in the contract documents; the plans would be prepared prior to initiation of construction activities.

In addition, the potential exists for elevated levels of methane and/or hydrogen sulfide gases to be present in subsurface soils, which would pose an explosion or inhalation risk and have an impact on workers, public health, and the environment. Engineered barriers or other design features may be necessary to prevent vapor intrusion of certain contaminants (e.g., VOCs, methane, hydrogen sulfide) into subsurface structures; monitoring of the subsurface air during construction activities may be necessary to help prevent exposure to airborne contaminants emanating from the surrounding soil to construction workers (see project measure PM HAZ-1).

There are plugged, idle, and active oil and gas wells within the RSA; some of these wells may be within the alignment footprint. Care should be exercised while tunneling near the well locations to avoid disturbing the well casing, which could create a pathway for migration of gases or residual petroleum. Encountering contaminated soil near the well casing is also possible. All construction and grading work conducted within 100 feet of an oil or gas well site should be coordinated with the California Department of Conservation. Active wells would need to be capped and abandoned or relocated. Associated facilities such as pipelines could also need to be relocated if they fall within the construction footprint.

The alignment and stations would not create a significant hazard to the public or the environment related to location on a hazardous materials site. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.11.7.4.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. There are 39 REC sites within KNE San Vicente–Fairfax Alignment RSA, 17 of which are on the Cortese list. The alignment would also pass through four oil and gas fields, and two other oil and gas fields are within the RSA. However, impacts related to contamination from REC sites (including Cortese list sites) or historic releases from oil and gas fields would have been remediated during construction. Any engineered barriers installed to prevent exposure of the public or the environment to airborne contaminants related to vapor intrusion may need to be monitored during operation of the alignment to ensure they are functioning as designed (see project measure PM HAZ-1). Hazardous materials plans, as required by state laws and regulations, would be prepared and implemented to help ensure that hazardous materials are handled correctly if residual contamination is detected. The alignment and stations would not create a significant hazard to the public or the environment related to location on a hazardous materials site. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.11.7.4.2 KNE FAIRFAX ALIGNMENT

3.11.7.4.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. There are 28 REC sites within the KNE Fairfax Alignment RSA, 15 of which are on the Cortese list. The alignment would also pass through three oil and gas fields, and one other oil and gas field is within the RSA.

Construction of the alignment and stations would include demolition, earthmoving, and excavation in areas of known or potential soil and/or groundwater contamination. Site-specific Phase I ESAs and hazardous materials building surveys would be conducted during the property acquisition phase to help ensure that potential contamination is identified and addressed, and that wastes are properly transported and disposed prior to construction. Contractors would comply with SWRCB requirements to help ensure the proper transport, labeling, containment, cover, and other BMPs for storage of hazardous materials during construction. A hazardous materials plan would be created and implemented to help ensure proper handling of hazardous materials. Details and content of the plan would be specified in the contract documents; the plan would be prepared prior to initiation of construction activities.

Soil to be excavated from potentially contaminated properties, including Cortese list sites, or within oil and gas fields, may need to be tested in advance of or during construction to identify whether the soils are contaminated, and if so, how they may be handled and/or remediated. If dewatering is necessary, the extracted groundwater may also need to be tested prior to discharge or disposal.

Construction activities within the four oil and gas fields in the RSA could disturb naturally occurring subsurface petroleum, which could result in spill conditions related to the naturally occurring petroleum. There would be a risk of explosions or spills related to active or idle oil and gas wells and related infrastructure encountered during construction. Any spills would be addressed in accordance with project-specific spill response and material management plans. Details and content of the plans would be specified in the contract documents; the plans would be prepared prior to initiation of construction activities.

In addition, the potential exists for elevated levels of methane and/or hydrogen sulfide gases to be present in subsurface soils, which would pose an explosion or inhalation risk and have an impact on workers, public health, and the environment. Engineered barriers or other design features may be necessary to prevent vapor intrusion of certain contaminants (e.g., VOCs, methane, hydrogen sulfide) into subsurface structures; monitoring of the subsurface air during construction activities may be necessary to help prevent exposure to airborne contaminants emanating from the surrounding soil to construction workers (see project measure PM HAZ-1).

There are plugged, idle, and active oil and gas wells within the RSA; some of these wells may be within the alignment footprint. Care should be exercised while tunneling near the well locations to avoid disturbing the well casing, which could create a pathway for migration of gases or residual petroleum. Encountering contaminated soil near the well casing is also possible. All construction and grading work conducted within 100 feet of an oil or gas well site should be coordinated with the California Department of Conservation. Active wells would need to be capped and abandoned or relocated. Associated facilities such as pipelines could also need to be relocated if they fall within the construction footprint.

The alignment and stations would not create a significant hazard to the public or the environment related to location on a hazardous materials site. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.11.7.4.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. There are 28 REC sites within the KNE Fairfax Alignment RSA, 15 of which are on the Cortese list. The alignment would also pass through three oil and gas fields, and one other oil and gas field is within the RSA. However, impacts related to contamination from REC sites (including Cortese list sites) or historic releases from oil and gas fields would have been remediated during construction. Any engineered barriers installed to prevent exposure of the public or the environment to airborne contaminants related to vapor intrusion may need to be monitored during operation of the alignment to ensure they are functioning as designed (see project measure PM HAZ-1). Hazardous materials plans, as required by state laws and regulations, would be prepared and implemented to help ensure that hazardous materials are handled correctly if residual contamination is detected. The alignment and stations would not create a significant hazard to the public or the environment related to location on a hazardous materials site. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.11.7.4.3 KNE LA BREA ALIGNMENT

3.11.7.4.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. There are 31 REC sites within the KNE La Brea Alignment RSA, 17 of which are on the Cortese list. The alignment would also pass through two oil and gas fields, and one other oil and gas field is within the RSA.

Construction of the alignment and stations would include demolition, earthmoving, and excavation in areas of known or potential soil and/or groundwater contamination. Site-specific Phase I ESAs and hazardous materials building surveys would be conducted during the property acquisition phase to help ensure that potential contamination is identified and addressed, and that wastes are properly transported and disposed prior to construction. Contractors would comply SWRCB requirements to help ensure the proper transport, labeling, containment, cover, and other BMPs for storage of hazardous materials during construction. A hazardous materials plan would be created and implemented to help ensure proper handling of hazardous materials. Details and content of the plan would be specified in the contract documents; the plan would be prepared prior to initiation of construction activities.

Soil to be excavated from potentially contaminated properties, including Cortese list sites, or within oil and gas fields, may need to be tested in advance of or during construction to identify whether the soils are contaminated, and if so, how they may be handled and/or remediated. If dewatering is necessary, the extracted groundwater may also need to be tested prior to discharge or disposal.

Construction activities within the three oil and gas fields in the RSA could disturb naturally occurring subsurface petroleum, which could result in spill conditions related to the naturally occurring petroleum. There would be a risk of explosions or spills related to active or idle oil and gas wells and related infrastructure encountered during construction. Any spills would be addressed in accordance with project-specific spill response and material management plans. Details and content of the plans would be specified in the contract documents; the plans would be prepared prior to initiation of construction activities.

In addition, the potential exists for elevated levels of methane and/or hydrogen sulfide gases to be present in subsurface soils, which would pose an explosion or inhalation risk and have an impact on workers, public health, and the environment. Engineered barriers or other design features may be necessary to prevent vapor intrusion of certain contaminants (e.g., VOCs, methane, hydrogen sulfide) into subsurface structures; monitoring of the subsurface air during construction activities may be necessary to help prevent exposure to airborne contaminants emanating from the surrounding soil to construction workers (see project measure PM HAZ-1).

There are plugged, idle, and active oil and gas wells within the RSA; some of these wells may be within the alignment footprint. Care should be exercised while tunneling near the well locations to avoid disturbing the well casing, which could create a pathway for migration of gases or residual petroleum. Encountering contaminated soil near the well casing is also possible. All construction and grading work conducted within 100 feet of an oil or gas well site should be coordinated with the California Department of Conservation. Active wells would need to be capped and abandoned or relocated. Associated facilities such as pipelines could also need to be relocated if they fall within the construction footprint.

The alignment and stations would not create a significant hazard to the public or the environment related to location on a hazardous materials site. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.11.7.4.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. There are 31 REC sites within KNE La Brea Alignment RSA, 17 of which are on the Cortese list. The alignment would also pass through two oil and gas fields, and one other oil and gas field is within the RSA. However, impacts related to contamination from REC sites (including Cortese list sites) or historic releases from oil and gas fields would have been remediated during construction. Any engineered barriers installed to prevent exposure of the public or the environment to airborne contaminants related to vapor intrusion may need to be monitored during operation of the alignment to ensure they are functioning as designed (see project measure PM HAZ-1). Hazardous materials plans, as required by state laws and regulations, would be prepared and implemented to help ensure that hazardous materials are handled correctly if residual contamination is detected. The alignment and stations would not create a significant hazard to the public or the environment related to location on a hazardous materials site. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.11.7.4.4 HOLLYWOOD BOWL DESIGN OPTION

3.11.7.4.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. There is one REC site within the Hollywood Bowl Design Option RSA, but the REC site is not on the Cortese list. There are no oil and gas fields in the RSA.

Construction of the design option would include earthmoving and excavation in areas of known or potential soil and/or groundwater contamination. Contractors would comply with SWRCB requirements to help ensure the proper transport, labeling, containment, cover, and other BMPs for storage of hazardous materials during construction. A hazardous materials plan, as required by state laws and regulations, would be created and implemented to help ensure proper handling of hazardous materials. Details and content of the plan would be specified in the contract documents; the plan would be prepared prior to initiation of construction activities.

Soil to be excavated from potentially contaminated properties may need to be tested in advance of or during construction to identify whether the soils are contaminated, and if so, how they may be handled and/or remediated. If dewatering is necessary, the extracted groundwater may also need to be tested prior to discharge or disposal.

The design option would not create a significant hazard to the public or the environment related to location on a hazardous materials site. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.11.7.4.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. There is one REC site within the Hollywood Bowl Design Option RSA, but the REC site is not on the Cortese list. There are no oil and gas fields in the RSA. Impacts related to contamination from the currently identified REC site or any sites identified during construction (including Cortese list sites) would have been remediated during construction. Hazardous materials plans, as

required by state laws and regulations, would be prepared and implemented to help ensure that hazardous materials are handled correctly if residual contamination is detected. The design option would not create a significant hazard to the public or the environment related to location on a hazardous materials site. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.11.7.4.5 MAINTENANCE AND STORAGE FACILITY

3.11.7.4.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. There are nine REC sites within the MSF RSA, two of which are on the Cortese list. No oil and gas fields or oil and gas wells are located in the RSA.

Construction of the MSF would include demolition, earthmoving, and excavation in areas of known or potential soil and/or groundwater contamination. Site-specific Phase I ESAs and hazardous materials building surveys would be conducted during the property acquisition phase to help ensure that potential contamination is identified and addressed, and that wastes are properly transported and disposed of prior to construction. Contractors would comply with SWRCB requirements to help ensure the proper transport, labeling, containment, cover, and other BMPs for storage of hazardous materials during construction. A hazardous materials plan, as required by state laws and regulations, would be created and implemented to help ensure proper handling of hazardous materials. Details and content of the plan would be specified in the contract documents; the plan would be prepared prior to initiation of construction activities.

Soil to be excavated from potentially contaminated properties, including Cortese list sites, may need to be tested in advance of or during construction to identify whether the soils are contaminated, and if so, how they may be handled and/or remediated. If dewatering is necessary, the extracted groundwater may also need to be tested prior to discharge or disposal.

The MSF would not create a significant hazard to the public or the environment related to location on a hazardous materials site. Therefore, the MSF would have a less than significant impact during construction.

3.11.7.4.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. There nine REC sites within MSF RSA, two of which are on the Cortese list, and there are no oil and gas fields or oil and gas wells in the RSA. However, impacts related to contamination from REC sites (including Cortese list sites) would have been remediated during construction. Hazardous materials plans, as required by state laws and regulations, would be prepared and implemented to help ensure that hazardous materials are handled correctly if residual contamination is detected. Details and content of the plan would be specified in the contract documents; the plan would be prepared prior to initiation of construction activities. The MSF would not create a significant hazard to the public or the environment related to location on a hazardous materials site. Therefore, the MSF would have a less than significant impact during operation.

3.11.7.5 IMPACT HAZ-5: SAFETY HAZARDS OR EXCESSIVE NOISE FOR A PROJECT LOCATED NEAR AN AIRPORT

Impact HAZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

3.11.7.5.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.11.7.5.1.1 CONSTRUCTION IMPACTS

No Impact. The closest airport to the KNE San Vicente–Fairfax Alignment is the Santa Monica Airport, located 5.4 miles southwest of the alignment. LAX is just over six miles from the south end of the alignment. The alignment is not within two miles of an airport and would not result in a safety hazard or excessive noise for people residing or working in the RSA. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during construction.

3.11.7.5.1.2 OPERATIONAL IMPACTS

No Impact. The closest airport to the KNE San Vicente–Fairfax Alignment is the Santa Monica Airport, located 5.4 miles southwest of the alignment. LAX is just over six miles from the south end of the alignment. The alignment is not within two miles of an airport and would not result in a safety hazard or excessive noise for people residing or working in the RSA. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during operation.

3.11.7.5.2 KNE FAIRFAX ALIGNMENT

3.11.7.5.2.1 CONSTRUCTION IMPACTS

No Impact. The closest airport to the KNE Fairfax Alignment is the Santa Monica Airport, located 5.5 miles southwest of the alignment. LAX is just over six miles from the south end of the alignment. The alignment is not within two miles of an airport and would not result in a safety hazard or excessive noise for people residing or working in the RSA. Therefore, the KNE Fairfax Alignment would have no impact during construction.

3.11.7.5.2.2 OPERATIONAL IMPACTS

No Impact. The closest airport to the KNE Fairfax Alignment is the Santa Monica Airport, located 5.5 miles southwest of the alignment. LAX is just over six miles from the south end of the alignment. The alignment is not within two miles of an airport and would not result in a safety hazard or excessive noise for people residing or working in the RSA. Therefore, the KNE Fairfax Alignment would have no impact during operation.

3.11.7.5.3 KNE LA BREA ALIGNMENT

3.11.7.5.3.1 CONSTRUCTION IMPACTS

No Impact. The closest airport to the KNE La Brea Alignment is the Santa Monica Airport, located six miles southwest of the alignment. LAX is just over six miles from the south end of the alignment. The alignment is not within two miles of an airport and would not result in a safety hazard or excessive noise for people residing or working in the RSA. Therefore, the KNE La Brea Alignment would have no impact during construction.

3.11.7.5.3.2 OPERATIONAL IMPACTS

No Impact. The closest airport to the KNE La Brea Alignment is the Santa Monica Airport, located six miles southwest of the alignment. LAX is just over six miles from the south end of the alignment. The alignment is not within two miles of an airport and would not result in a safety hazard or excessive noise for people residing or working in the RSA. Therefore, the KNE La Brea Alignment would have no impact during operation.

3.11.7.5.4 HOLLYWOOD BOWL DESIGN OPTION

3.11.7.5.4.1 CONSTRUCTION IMPACTS

No Impact. The closest airport to the Hollywood Bowl Design Option is the Santa Monica Airport. In addition, the Hollywood Burbank Airport is located 5.8 miles northeast of the design option, and LAX is approximately 12 miles from the south end of the design option. The design option is not within two miles of an airport and would not result in a safety hazard or excessive noise for people residing or working in the RSA. Therefore, the Hollywood Bowl Design Option would have no impact during construction.

3.11.7.5.4.2 OPERATIONAL IMPACTS

No Impact. The closest airport to the Hollywood Bowl Design Option is the Santa Monica Airport. In addition, the Hollywood Burbank Airport is located 5.8 miles northeast of the design option, and LAX is approximately 12 miles from the south end of the design option. The design option is not within two miles of an airport and would not result in a safety hazard or excessive noise for people residing or working in the RSA. Therefore, the Hollywood Bowl Design Option would have no impact during operation.

3.11.7.5.5 MAINTENANCE AND STORAGE FACILITY

3.11.7.5.5.1 CONSTRUCTION IMPACTS

No Impact. While the MSF would be within two miles of LAX, it would be outside of the safety zone for the LAX runways and there would be no safety hazard or excessive noise for people residing or working in the RSA. Therefore, the MSF would have no impact during construction.

3.11.7.5.5.2 OPERATIONAL IMPACTS

No Impact. While the MSF would be within two miles of LAX, it would be outside of the safety zone for the LAX runways and there would be no safety hazard or excessive noise for people residing or working in the RSA. Therefore, the MSF would have no impact during operation.

3.11.7.6 IMPACT HAZ-6: IMPACTS TO EMERGENCY RESPONSE PLAN OR EMERGENCY EVACUATION PLAN

Impact HAZ-6: Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

3.11.7.6.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.11.7.6.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction activities associated with the KNE San Vicente–Fairfax Alignment could interfere with adopted emergency response or evacuation plans as a result of temporary construction activities within rights-of-way, primarily by temporary construction barricades or other obstructions that could impede emergency access. However, the RSA is crossed by numerous streets that provide multiple alternate routes for emergency response and evacuation. In addition, the goals, objectives, and policies of the Los Angeles County Operational Area emergency response plan provide guidance during situations requiring an unusual or extraordinary emergency response. Implementation of project measure PM TRA-2, Transportation Best Management Practices, would ensure Metro creates an emergency response plan that would incorporate and coordinate all the facilities and personnel of county government, along with the jurisdictional resources of the cities and special districts in the county, into an efficient operational area organization capable of responding to any emergency using a standard emergency management system, mutual aid, and other appropriate response procedures.

The City of Los Angeles Department of Transportation (LADOT) and LAFD are responsible for ensuring that future development does not impair or physically interfere with an adopted emergency response or evacuation plan within the RSA. As part of Metro's standard development procedures, construction and traffic management plans would be submitted to the LADOT and LAFD for review and approval to ensure the alignment has adequate emergency access and escape routes (clearly marked and delineated) during construction, in compliance with existing regulations. In addition, construction of the alignment and stations would not introduce any features that would preclude implementation of or alter these policies or procedures, and construction activities would not impair implementation of, or physically interfere with, the emergency response plan.

As described above, with development and implementation of construction and traffic management plans, construction activities associated with the alignment and stations would not impair or physically interfere with adopted emergency response or evacuation plans. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.11.7.6.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. Because operation of the KNE San Vicente–Fairfax Alignment would be underground except for the station entrances (which would be situated on parcels or property not within the public right-of-way), it would not interfere with existing emergency response or evacuation plans. As part of Metro's standard development procedures and part of project measure PM TRA-2, a traffic management plan would be submitted to the LADOT and LAFD for review and approval to ensure the alignment has adequate emergency access and escape routes (clearly marked and delineated) during operation, in compliance with existing regulations. In addition, operation of the alignment and stations would not introduce any features that would preclude implementation of or alter these policies or procedures, and operational activities would not impair implementation of or physically interfere with the emergency response plan. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.11.7.6.2 KNE FAIRFAX ALIGNMENT

3.11.7.6.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction activities associated with the KNE Fairfax Alignment could interfere with adopted emergency response or evacuation plans as a result of temporary construction activities within rights-of-way, primarily by temporary construction barricades or other obstructions that could impede emergency access. However, the RSA is crossed by numerous streets that provide multiple alternate routes for emergency response and evacuation. In addition, the goals, objectives, and policies of the Los Angeles County Operational Area emergency response plan provide guidance during situations requiring an unusual or extraordinary emergency response. Implementation of project measure PM TRA-2, Transportation Best Management Practices, would ensure Metro creates an emergency response plan that would incorporate and coordinate all the facilities and personnel of county government, along with the jurisdictional resources of the cities and special districts in the county, into an efficient operational area organization capable of responding to any emergency using a standard emergency management system, mutual aid, and other appropriate response procedures.

The LADOT and LAFD are responsible for ensuring that future development does not impair or physically interfere with an adopted emergency response or evacuation plan within the RSA. As part of Metro's standard development procedures, construction and traffic management plans would be submitted to the LADOT and LAFD for review and approval to ensure the alignment has adequate emergency access and escape routes (clearly marked and delineated) during construction, in compliance with existing regulations. In addition, construction of the alignment and stations would not introduce any features that would preclude implementation of or alter these policies or procedures, and construction activities would not impair implementation of, or physically interfere with, the emergency response plan.

As described above, with development and implementation of construction and traffic management plans, construction activities associated with the alignment and stations would not impair or physically interfere with adopted emergency response or evacuation plans. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.11.7.6.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. Because operation of the KNE Fairfax Alignment would be underground except for the station entrances (which would be situated on parcels or property not within the public right-of-way), it would not interfere with existing emergency response or evacuation plans. As part of Metro's standard development procedures and part of project measure PM TRA-2, a traffic management plan would be submitted to the LADOT and LAFD for review and approval to ensure the alignment has adequate emergency access and escape routes (clearly marked and delineated) during operation, in compliance with existing regulations. In addition, operation of the alignment and stations would not introduce any features that would preclude implementation of or alter these policies or procedures, and operational activities would not impair implementation of or physically interfere with the emergency response plan. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.11.7.6.3 KNE LA BREA ALIGNMENT

3.11.7.6.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction activities associated with the KNE La Brea Alignment could interfere with adopted emergency response or evacuation plans as a result of temporary construction activities within rights-of-way, primarily by temporary construction barricades or other obstructions that could impede emergency access. However, the RSA is crossed by numerous streets that provide multiple alternate routes for emergency response and evacuation. In addition, the goals, objectives, and policies of the Los Angeles County Operational Area emergency response plan provide guidance during situations requiring an unusual or extraordinary emergency response. Implementation of project measure PM TRA-2, Transportation Best Management Practices, would ensure Metro creates an emergency response plan that would incorporate and coordinate all the facilities and personnel of county government, along with the jurisdictional resources of the cities and special districts in the county, into an efficient operational area organization capable of responding to any emergency using a standard emergency management system, mutual aid, and other appropriate response procedures.

The City of LADOT and LAFD are responsible for ensuring that future development does not impair or physically interfere with an adopted emergency response or evacuation plan within the RSA. As part of Metro's standard development procedures, construction and traffic management plans would be submitted to the LADOT and LAFD for review and approval to ensure the alignment has adequate emergency access and escape routes (clearly marked and delineated) during construction, in compliance with existing regulations. In addition, construction of the alignment and stations would not introduce any features that would preclude implementation of or alter these policies or procedures, and construction activities would not impair implementation of, or physically interfere with, the emergency response plan.

As described above, with development and implementation of construction and traffic management plans, construction activities associated with the alignment and stations would not impair or physically interfere with adopted emergency response or evacuation plans. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.11.7.6.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. Because operation of the KNE La Brea Alignment would be underground except for the station entrances (which would be situated on parcels or property not within the public right-of-way), it would not interfere with existing emergency response or evacuation plans. As part of Metro's standard development procedures and part of project measure PM TRA-2, a traffic management plan would be submitted to the LADOT and LAFD for review and approval to ensure the alignment has adequate emergency access and escape routes (clearly marked and delineated) during operation, in compliance with existing regulations. In addition, operation of the alignment and stations would not introduce any features that would preclude implementation of or alter these policies or procedures, and operational activities would not impair implementation of or physically interfere with the emergency response plan. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.11.7.6.4 HOLLYWOOD BOWL DESIGN OPTION

3.11.7.6.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction activities associated with the Hollywood Bowl Design Option could interfere with adopted emergency response or evacuation plans as a result of temporary construction activities within rights-of-way, primarily by temporary construction barricades or other obstructions that could impede emergency access. However, the RSA is crossed by numerous streets that provide multiple alternate routes for emergency response and evacuation. In addition, the goals, objectives, and policies of the Los Angeles County Operational Area emergency response plan provide guidance during situations requiring an unusual or extraordinary emergency response. Implementation of project measure PM TRA-2, Transportation Best Management Practices, would ensure Metro creates an emergency response plan that would incorporate and coordinate all the facilities and personnel of county government, along with the jurisdictional resources of the cities and special districts in the county, into an efficient operational area organization capable of responding to any emergency using a standard emergency management system, mutual aid, and other appropriate response procedures.

The LADOT and LAFD are responsible for ensuring that future development does not impair or physically interfere with an adopted emergency response or evacuation plan within the RSA. As part of Metro's standard development procedures, construction and traffic management plans would be submitted to the LADOT and LAFD for review and approval to ensure the design option has adequate emergency access and escape routes (clearly marked and delineated) during construction, in compliance with existing regulations. In addition, construction of the design option and station would not introduce any features that would preclude implementation of or alter these policies or procedures, and construction activities would not impair implementation of, or physically interfere with, the emergency response plan.

As described above, with development and implementation of construction and traffic management plans, construction activities associated with the design option and station would not impair or physically interfere with adopted emergency response or evacuation plans. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.11.7.6.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. Because operation of the Hollywood Bowl Design Option would be underground except for the station entrances (which would be situated on parcels or property not within the public right-of-way), it would not interfere with existing emergency response or evacuation plans. As part of Metro's standard development procedures and part of project measure PM TRA-2, a traffic management plan would be submitted to the LADOT and LAFD for review and approval to ensure the design option has adequate emergency access and escape routes (clearly marked and delineated) during operation, in compliance with existing regulations. In addition, operation of the design option and station would not introduce any features that would preclude implementation of or alter these policies or procedures, and operational activities would not impair implementation of or physically interfere with the emergency response plan. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.11.7.6.5 MAINTENANCE AND STORAGE FACILITY

3.11.7.6.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction activities associated with the MSF could interfere with adopted emergency response or evacuation plans as a result of temporary construction activities within rights-of-way, primarily by temporary construction barricades or other obstructions that could impede emergency access. However, the MSF site is bounded by several streets that provide routes for emergency response and evacuation. In addition, the goals, objectives, and policies of the Los Angeles County Operational Area emergency response plan provide guidance during situations requiring an unusual or extraordinary emergency response. Implementation of project measure PM TRA-2, Transportation Best Management Practices, would ensure Metro creates an emergency response plan that would incorporate and coordinate all the facilities and personnel of county government, along with the jurisdictional resources of the cities and special districts in the county, into an efficient operational area organization capable of responding to any emergency using a standard emergency management system, mutual aid, and other appropriate response procedures.

The LADOT, LAFD, and City of Inglewood are responsible for ensuring that future development does not impair or physically interfere with an adopted emergency response or evacuation plan within the RSA. As part of Metro's standard development procedures, construction and traffic management plans would be submitted to the LADOT, LAFD, and/or City of Inglewood for review and approval to ensure the MSF has adequate emergency access and escape routes (clearly marked and delineated) during construction, in compliance with existing regulations. In addition, construction of the MSF would not introduce any features that would preclude implementation of or alter these policies or procedures, and construction activities would not impair implementation of, or physically interfere with, the emergency response plan.

As described above, with development and implementation of construction and traffic management plans, construction activities associated with the MSF would not impair or physically interfere with adopted emergency response or evacuation plans. Therefore, the MSF would have a less than significant impact during construction.

3.11.7.6.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. Because operation of the MSF would occur on parcels of property and not within the public right-of-way, it is not anticipated to interfere with existing emergency response or evacuation plans. As part of Metro's standard development procedures, a traffic management plan would be submitted to the LADOT, LAFD, and/or City of Inglewood, as applicable, for review and approval to ensure that the MSF has adequate emergency access and escape routes (clearly marked and delineated) during operation, in compliance with existing regulations. In addition, operation of the MSF would not introduce any features that would preclude implementation of or alter these policies or procedures, and operational activities would not impair implementation of or physically interfere with the emergency response plan. Therefore, the MSF would have a less than significant impact during operation.

3.11.7.7 IMPACT HAZ-7: RISK OF LOSS, INJURY, OR DEATH INVOLVING WILDLAND FIRES

Impact HAZ-7: Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

3.11.7.7.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.11.7.7.1.1 CONSTRUCTION IMPACTS

No Impact. The KNE San Vicente–Fairfax Alignment ends at the edge of a wildland fire zone (demarcated by Franklin Street); however, the northernmost 1,000 feet of the alignment (from the Hollywood/Highland Station to the north) would be underground. Construction of the alignment and stations would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during construction.

3.11.7.7.1.2 OPERATIONAL IMPACTS

No Impact. The KNE San Vicente–Fairfax Alignment ends at the edge of a wildland fire zone (demarcated by Franklin Street); however, the northernmost 1,000 feet of the alignment (from the Hollywood/Highland Station to the north) would be underground. The alignment and stations would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during operation.

3.11.7.7.2 KNE FAIRFAX ALIGNMENT

3.11.7.7.2.1 CONSTRUCTION IMPACTS

No Impact. The KNE Fairfax Alignment ends at the edge of a wildland fire zone (demarcated by Franklin Street); however, the northernmost 1,000 feet of the alignment (from the Hollywood/Highland Station to the north) would be underground. Construction of the alignment and stations would not expose people

or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. Therefore, the KNE Fairfax Alignment would have no impact during construction.

3.11.7.7.2.2 OPERATIONAL IMPACTS

No Impact. The KNE Fairfax Alignment ends at the edge of a wildland fire zone (demarcated by Franklin Street); however, the northernmost 1,000 feet of the alignment (from the Hollywood/Highland Station to the north) would be underground. The alignment and stations would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. Therefore, the KNE Fairfax Alignment would have no impact during operation.

3.11.7.7.3 KNE LA BREA ALIGNMENT

3.11.7.7.3.1 CONSTRUCTION IMPACTS

No Impact. The KNE La Brea Alignment ends at the edge of a wildland fire zone (demarcated by Franklin Street); however, the northernmost 1,000 feet of the alignment (from the Hollywood/Highland Station to the north) would be underground. Construction of the alignment and stations would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. Therefore, the KNE La Brea Alignment would have no impact during construction.

3.11.7.7.3.2 OPERATIONAL IMPACTS

No Impact. The KNE La Brea Alignment ends at the edge of a wildland fire zone (demarcated by Franklin Street); however, the northernmost 1,000 feet of the alignment (from the Hollywood/Highland Station to the north) would be underground. The alignment and stations would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. Therefore, the KNE La Brea Alignment would have no impact during operation.

3.11.7.7.4 HOLLYWOOD BOWL DESIGN OPTION

3.11.7.7.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The Hollywood Bowl Design Option RSA (from Franklin Street to the northern terminus of the design option) is within a wildland fire zone with a very high fire hazard severity. While the entirety of the design option is within an area with vegetation that can be prone to fire, the vegetated areas are not contiguous due to the presence of roads and parking areas for the Hollywood Bowl. The proposed station for the design option would be situated within an existing parking area and would be constructed of non-flammable materials. The remainder of the design option would be entirely underground where it would be unaffected by fire. Therefore, although the surrounding areas could experience a fire, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.11.7.7.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. The Hollywood Bowl Design Option RSA (from Franklin Street to the northern terminus of the design option) is within a wildland fire zone with a very high fire hazard severity. While the entirety of the design option is within an area with vegetation that can be prone to fire, the vegetated areas are not contiguous due to the presence of roads and parking areas for the Hollywood Bowl. The proposed station for the design option would be situated within an existing parking area and would be constructed of non-flammable materials. The remainder of the design option would be entirely underground where it would be unaffected by fire. Therefore, although the surrounding areas could experience a fire, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.11.7.7.5 MAINTENANCE AND STORAGE FACILITY

3.11.7.7.5.1 CONSTRUCTION IMPACTS

No Impact. The MSF site is over 1.75 miles southeast of the nearest wildland fire zone. Therefore, the MSF would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires, and it would have no impact during construction.

3.11.7.7.5.2 OPERATIONAL IMPACTS

No Impact. The MSF site is over 1.75 miles southeast of the nearest wildland fire zone. Therefore, the MSF would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires, and it would have no impact during operation.

3.11.7.8 MITIGATION MEASURES

The mitigation measure described below is provided to reduce significant impacts related to hazards and hazardous materials. Section 3.11.7.8.2 discusses impacts significance after mitigation.

3.11.7.8.1 MM HAZ-1: AVOID AND MINIMIZE EMISSIONS OF HAZARDOUS MATERIALS, SUBSTANCES, AND MIXTURES WITHIN 0.25 MILE OF SCHOOLS

Construction Mitigation. As part of construction activities, hazardous materials may be used for a variety of processes. Wherever possible, the hazardous materials would be replaced with nonhazardous materials. Prior to construction, the contractor shall prepare a memorandum regarding hazardous materials BMPs related to construction activity for approval by Metro. The memorandum shall confirm that the contractor will not handle or store an extremely hazardous substance (as defined in California Public Resources Code Section 21151.4) or a mixture containing extremely hazardous substances in a quantity equal to or greater than the state threshold quantity specified pursuant to subdivision (j) of Section 25532 of the Health and Safety Code within 0.25 mile of a school, unless within a designated staging area with appropriate procedures and protocols in place. The memorandum shall acknowledge that prior to construction activities, signage shall be installed to delimit all work areas within 0.25 mile of a school, informing the contractor not to bring extremely hazardous substances into the area. The contractor shall be required to

monitor all use of extremely hazardous substances. This mitigation measure for hazardous materials and wastes is consistent with California Public Resources Code Section 21151.4.

Operational Mitigation. During operations, small quantities of hazardous materials may be used for maintenance activities. Wherever possible, these hazardous materials shall be replaced with nonhazardous materials. No extremely hazardous substances (or mixtures containing extremely hazardous substances) shall be used within 0.25 mile of any school in accordance with California Public Resources Code Section 21151.4 in a quantity equal to or greater than the state threshold quantity specified pursuant to subdivision (j) of Section 25532 of the Health and Safety Code. This mitigation measure for hazardous materials and wastes is consistent with California Public Resources Code Section 21151.4.

3.11.7.8.2 IMPACT SIGNIFICANCE AFTER MITIGATION

As described in Section 3.11.7.3, there would be significant impacts related to hazardous emissions, materials, or waste within 0.25 mile of a school (Impact HAZ-3). The following subsections describe the impact significance after implementation of mitigation.

IMPACT HAZ-3: HAZARDOUS EMISSIONS, MATERIALS, OR WASTE WITHIN 0.25 MILE OF A SCHOOL

Construction Impacts

Implementation of mitigation measure MM HAZ-1 (Avoid and Minimize Emissions of Hazardous Materials, Substances, and Mixtures within 0.25 mile of Schools) during construction of the alignments and design option would reduce impacts related to use of and release of hazardous materials and substances near schools to a less than significant level.

Operational Impacts

Implementation of mitigation measure MM HAZ-1 (Avoid and Minimize Emissions of Hazardous Materials, Substances, and Mixtures within 0.25 mile of Schools) during operation of the alignments and design option would reduce impacts related to use of and release of hazardous materials and substances near schools to a less than significant level.

3.11.7.9 SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

Table 3.11-8 summarizes the hazards and hazardous materials impact significance conclusions and applicable mitigation measures.

TABLE 3.11-8. KNE SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

IMPACT		IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES				
		KNE SAN VICENTE–FAIRFAX ALIGNMENT	KNE FAIRFAX ALIGNMENT	KNE LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MAINTENANCE AND STORAGE FACILITY
Impact HAZ-1: Hazards from Routine Transport, Use, or Disposal of Hazardous Materials	Impact before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact after Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
Impact HAZ-2: Hazards Due to Upset and Accident Conditions that Involve the Release of Hazardous Materials	Impact before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact after Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
Impact HAZ-3: Hazardous Emissions, Materials, or Waste Within 0.25 Mile of a School	Impact before Mitigation	Construction: Significant Operation: Significant	Construction: Significant Operation: Significant	Construction: Significant Operation: Significant	Construction: Significant Operation: Significant	Construction: No Impact Operation: No Impact
	Mitigation Measures	Construction: MM HAZ-1 Operation: MM HAZ-1	Construction: MM HAZ-1 Operation: MM HAZ-1	Construction: MM HAZ-1 Operation: MM HAZ-1	Construction: MM HAZ-1 Operation: MM HAZ-1	None Required
	Impact after Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: No Impact Operation: No Impact

IMPACT		IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES				
		KNE SAN VICENTE–FAIRFAX ALIGNMENT	KNE FAIRFAX ALIGNMENT	KNE LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MAINTENANCE AND STORAGE FACILITY
Impact HAZ-4: Hazards Due to Location on a Hazardous Materials Site	Impact before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact after Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
Impact HAZ-5: Safety Hazards or Excessive Noise for a Project Located Near an Airport	Impact before Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact after Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact. Operation: No Impact	Construction: No Impact. Operation: No Impact	Construction: No Impact. Operation: No Impact	Construction: No Impact Operation: No Impact
Impact HAZ-6: Impacts to Emergency Response Plan or Emergency Evacuation Plan	Impact before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact after Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
Impact HAZ-7: Risk of Loss, Injury, or Death Involving Wildland Fires	Impact before Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: LTS Operation: LTS	Construction: No Impact Operation: No Impact
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact after Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact. Operation: No Impact	Construction: No Impact. Operation: No Impact	Construction: LTS. Operation: LTS	Construction: No Impact Operation: No Impact

Source: Connect Los Angeles Partners 2024
LTS = less than significant impact

3.12 HYDROLOGY AND WATER QUALITY

3.12.1 INTRODUCTION

This discussion provides an evaluation of K Line Northern Extension (KNE) as it relates to hydrologic resources and water quality. It includes descriptions of the federal, state, and local regulatory setting, existing conditions, and the impacts from construction and operation of the proposed alignments and stations, design option, and maintenance and storage facility (MSF), as well as mitigation measures where applicable. For more detailed information, refer to the KNE Hydrology and Water Quality Technical Report (Appendix 3.12-A).

3.12.2 REGULATORY FRAMEWORK

3.12.2.1 FEDERAL

The following federal laws and regulations are relevant to construction and operation of the project:

- Clean Water Act (CWA) (United States Code [USC] Title 33, Section 1251 et seq.)
  - CWA Section 301 (Discharge of Pollutants into waters of the U.S.)
  - CWA Section 303 (Water Quality Impairments)
  - CWA Section 401 (Water Quality Certification)
  - CWA Section 402 (National Pollutant Discharge Elimination System [NPDES])1
  - CWA Section 404 (Permit for Discharge of Fill in Wetlands and Other Waters)
- Safe Drinking Water Act (42 USC Section 300[f] seq.)
- Rivers And Harbors Act of 1899 (33 USC 403 and 408)[2]
- Executive Order 11988: Floodplain Management
- National Flood Insurance Act (42 USC 4001 et seq.)

3.12.2.2 STATE

The State Water Resources Control Board (SWRCB) has nine Regional Water Quality Control Boards (RWQCBs) that exercise rulemaking and regulatory activities by basins throughout California. The SWRCB administers water rights, sets water pollution control policy, and issues water board orders on matters of statewide application, and it oversees water quality functions throughout the state by approving basin plans, total maximum daily loads (TMDLs), and NPDES permits. The RWQCBs are responsible for the development and implementation of water quality control plans, also known as basin plans.

[1] The State Water Resources Control Board issues both a Construction General NPDES Permit for protection of water quality from stormwater discharges during construction activities and an Industrial General NPDES Permit (IGP) for protection of water quality from stormwater discharges during industrial activities. Under construction and operation of this project, Metro would be responsible for compliance with both of these NPDES permits.

[2] Section 403 or 408 permitting is not expected for this project.

The following state laws and regulations are relevant to construction and operation of the project:

- Porter-Cologne Water Quality Act
- California Fish and Game Code Section 1602
- State Antidegradation Policy
- Alquist-Priolo Earthquake Fault Zoning Act
- Seismic Hazards Mapping Act
- Sustainable Groundwater Management Act[3]

In addition, the Construction General NPDES Permit and the Industrial General NPDES Permit described below include requirements that are relevant to design and implementation of the project.

3.12.2.2.1 CONSTRUCTION GENERAL NPDES PERMIT

The Construction General NPDES Permit Order No. 2022-0057-DWQ (adopted September 8, 2022, and effective September 1, 2023) regulates stormwater discharges from construction sites that result in a disturbed soil area of one acre or greater and/or are smaller sites that are part of a larger common plan of development. Operators of regulated construction sites are required to develop a Stormwater Pollution Prevention Plan (SWPPP); to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the Construction General NPDES Permit.

3.12.2.2.2 INDUSTRIAL GENERAL NPDES PERMIT

The SWRCB implements the Industrial General NPDES Permit (IGP) Order 2014-0057-DWQ as amended in 2015 and 2018 (effective July 1, 2020) to minimize impacts on stormwater from industrial activities. The alignments and stations, design option, and MSF would be subject to the regulations of the IGP because they are transportation facilities, including vehicle maintenance shops and equipment cleaning operations at the MSF. The IGP requires preparation of an industrial SWPPP and a monitoring plan for industrial facilities, including vehicle maintenance facilities associated with transportation operations.

3.12.2.3 REGIONAL

3.12.2.3.1 LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD

The Los Angeles Regional Water Quality Control Board (LARWQCB) has jurisdiction over stormwater and urban runoff discharges within the Los Angeles County Flood Control District (LACFCD). Applicable regional regulations are discussed below.

[3] The Sustainable Groundwater Management Act requires local agencies to form groundwater sustainability agencies for high- and medium-priority basins and for the agencies to develop and implement groundwater sustainability plans to avoid undesirable results and to mitigate overdraft within 20 years. The groundwater basins relevant to this analysis are very low-priority basins and do not have sustainable groundwater management plans (California Department of Water Resources [DWR] 2004a, b, c).

3.12.2.3.1.1 LOS ANGELES COUNTY MS4 PERMIT

LARWQCB Order No. R4-2012-0175, as amended by SWRCB Order No. WQ 2015-0075, LARWQCB Order No. R4-2012-0175-A01, NPDES Permit No. CAS004001, and Los Angeles County Municipal Separate Storm Sewer System (MS4) NPDES permit, regulates the LACFCD, Los Angeles County, and cities within the LACFCD for discharges of stormwater and urban runoff from MS4s, also called storm drainage systems. The Los Angeles County MS4 NPDES permit requires new development and redevelopment projects to have post-construction controls to manage pollutants, pollutant loads, and runoff volume emanating from the project site. New development and redevelopment projects are also required to implement hydrologic control measures.

3.12.2.3.1.2 CONSTRUCTION DEWATERING

The following NPDES permits regulate construction dewatering:

- LARWQCB Order No. R4-2023-0429 (NPDES No. CAG994004) Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties (Construction Dewatering Permit)
- LARWQCB Order No. 93-010, Waste Discharge Requirements for Specified Discharges to Groundwater in the Santa Clara River and Los Angeles River Basins

3.12.2.3.1.3 DISCHARGE OF NON-HAZARDOUS CONTAMINATED SOILS AND OTHER WASTES

LARWQCB Order No. 91-93, Waste Discharge Requirements for Discharge of Non-Hazardous Contaminated Soils and Other Wastes in Los Angeles River and Santa Clara River Basins, protects waters of the state from contamination due to disposal of soils containing moderate concentrations of petroleum hydrocarbons, heavy metals, and other wastes.

3.12.2.3.1.4 LOS ANGELES BASIN PLAN

The Water Quality Control Plan: Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (LARWQCB 2019), referred to herein as the Los Angeles Basin Plan, sets the regulatory water quality standards for surface waters and groundwater within the region.

3.12.2.3.1.5 TOTAL MAXIMUM DAILY LOADS

In accordance with the federal CWA and the state Porter-Cologne Water Quality Control Act, TMDLs have been developed and incorporated into the Los Angeles Basin Plan for some pollutants identified on the 303(d) list as causing contamination.

3.12.2.3.1.6 WATERSHED MANAGEMENT AND ENHANCED WATERSHED MANAGEMENT PROGRAMS

The goal of Watershed Management Programs and Enhanced Watershed Management Programs is to ensure that "discharges from the Los Angeles County MS4: (i) achieve applicable water quality-based effluent limitations that implement TMDLs; (ii) do not cause or contribute to exceedances of receiving water limitations; and (iii) for non-stormwater discharges from the MS4, are not sources of pollutants to

receiving waters." There are Enhanced Watershed Management Programs for the Ballona Creek and Dominguez Channel Watersheds.

3.12.2.4 LOCAL

The following Metro policies and standards are applicable to water use and project design:

- Water Use and Conservation Policy
- Metro Rail Design Criteria (MRDC)

Los Angeles County and the Cities of Los Angeles and West Hollywood have codes, ordinances, and general plans that regulate hydrology and water resources, water quality and stormwater management, and floodplain protection.

3.12.3 METHODOLOGY

3.12.3.1 CEQA METHODOLOGY

The purpose of this analysis is to evaluate the project against California Environmental Quality Act (CEQA) thresholds of significance as the basis for determining the level of impacts related to hydrologic resources and water quality.

3.12.3.2 SIGNIFICANCE THRESHOLDS

In accordance with Appendix G of the 2022 CEQA Guidelines, the project would have a significant impact related to hydrologic resources and water quality if it would:

- Impact HWQ-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.
- Impact HWQ-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
- Impact HWQ-3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a matter which would:
  i. result in substantial erosion or siltation on or off site;
  ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;
  iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
  iv. impede or redirect flood flows.
- Impact HWQ-4: In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.

- Impact HWQ-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

3.12.4 RESOURCE STUDY AREA

The resource study area (RSA) for the hydrologic resources and water quality analysis is delineated as a 300-foot radius around the alignments and stations, the design option, and the MSF.

3.12.5 EXISTING SETTING

This existing setting discussion summarizes current conditions related to hydrologic resources and water quality within and surrounding the KNE RSA.

3.12.5.1 REGIONAL SETTING

The RSA is an urban area located within the coastal plain of Los Angeles County, which is generally flat with mild slopes draining south to southwest toward the Pacific Ocean. The coastal plain is an alluvial lowland area bounded to the north by the Santa Monica Mountains and the Elysian, Repetto, and Puente Hills and bounded on the east and southeast by the Santa Ana Mountains and the San Joaquin Hills. The RSA spans two surface watersheds: the Ballona Creek Watershed and the Dominguez Channel Watershed. The alignment RSA also spans two groundwater basins: the Central Coastal Plain of Los Angeles and the Hollywood Coastal Plain of Los Angeles. The MSF is in the West Coast Basin.

The climate is generally Mediterranean and characterized by hot and dry summers, while winters are generally temperate and semi-moist. Overall, the RSA's climate is relatively mild, with summertime high temperatures averaging about 90 degrees Fahrenheit and wintertime lows in the 40s. Annual precipitation averages from 13 to 15 inches. Almost all rainfall occurs between October and early May. Precipitation in neighboring mountain areas is substantially higher, reaching 22 inches per year and higher.

LARWQCB exercises regulatory water quality authority over the entire RSA. Additional authorities with jurisdiction include LACFCD, City of Los Angeles, City of Beverly Hills, City of West Hollywood, Metro and Caltrans District 7. Although portions of Ballona Creek downstream of the RSA are maintained by U.S. Army Corps of Engineers, it regulates no open channels within the RSA.

3.12.5.1.1 WATERSHEDS AND SURFACE WATER BODIES

All alignments and the design option are located in the Santa Monica Bay Watershed Management Area and in the Ballona Creek Watershed. The Ballona Creek Watershed is bounded by the Santa Monica Mountains on the north, the Harbor Freeway (Interstate 110) on the east, Baldwin Hills on the south, and Santa Monica Bay on the west (Figure 3.12-1). In total, the Ballona Creek Watershed is 128 square miles and includes the Cities of Beverly Hills and West Hollywood, and portions of the Cities of Los Angeles, Inglewood, Culver City, and Santa Monica, as well as unincorporated areas of Los Angeles County (Los Angeles Bureau of Engineering n.d.).

FIGURE 3.12-1. HYDROLOGY AND SURFACE WATER BODIES

Source: Los Angeles Bureau of Engineering n.d.; Connect Los Angeles Partners 2024

Within the RSA, the urban watershed generally drains to Ballona Creek through a network of storm drains. The full length of Ballona Creek is divided into segments for monitoring and reporting purposes and these segments are called reaches. The northern limit of Reach 1 is the upstream end of Ballona Creek near Pickford Street, and the southern limit is bound by the Southern Pacific Railroad near Jefferson Boulevard and National Boulevard. The most upstream point of Ballona Creek Reach 1 is located 0.8 mile southwest of Midtown Crossing Station. LACFCD owns and operates drainage infrastructure within incorporated and unincorporated areas in the watershed. Surface runoff is captured via drainage infrastructure, including catch basins, inlets, and MS4s (herein referred to collectively as storm drains). The existing storm drains beneath the proposed Crenshaw/Adams Station drain to an unnamed concrete-channel tributary of Ballona Creek (LACFCD Project No. 53 Jefferson Blvd SD System, Adams Blvd Drain per LACFCD As-Built Drawing No. 634-D8.10). All other storm drain systems of the RSA also drain to Ballona Creek.

The entirety of the MSF site is located in the Dominguez Channel and Los Angeles/Long Beach Harbors Watershed Management Area in the Dominguez Channel Watershed. The Dominguez Channel Watershed is bounded by Manchester Boulevard to the north and the Los Angeles and Long Beach Harbors to the south. The western areas include portions of the Cities of El Segundo, Manhattan Beach, Redondo Beach, Torrance, and the Palos Verdes Hills. Portions of the unincorporated communities of Willowbrook, West Rancho Dominguez, and Carson are located in the eastern portion of the watershed. Surface runoff from the entirety of the proposed MSF site is routed to Dominguez Channel by existing storm drains. The most upstream point of the Dominguez Channel is 1.4 miles south and 2.4 miles east of the proposed MSF.

3.12.5.1.2 DRAINAGE

The highly developed, urban RSA drains via a series of storm drains of varying size (Figure 3.12-2). Storm drains are used to convey runoff in locations where streets or other drainage facilities exceed their designated capacity or are otherwise unable to drain. The KNE Draft Preliminary Drainage Report (Metro 2023) provides details about existing storm drain systems.

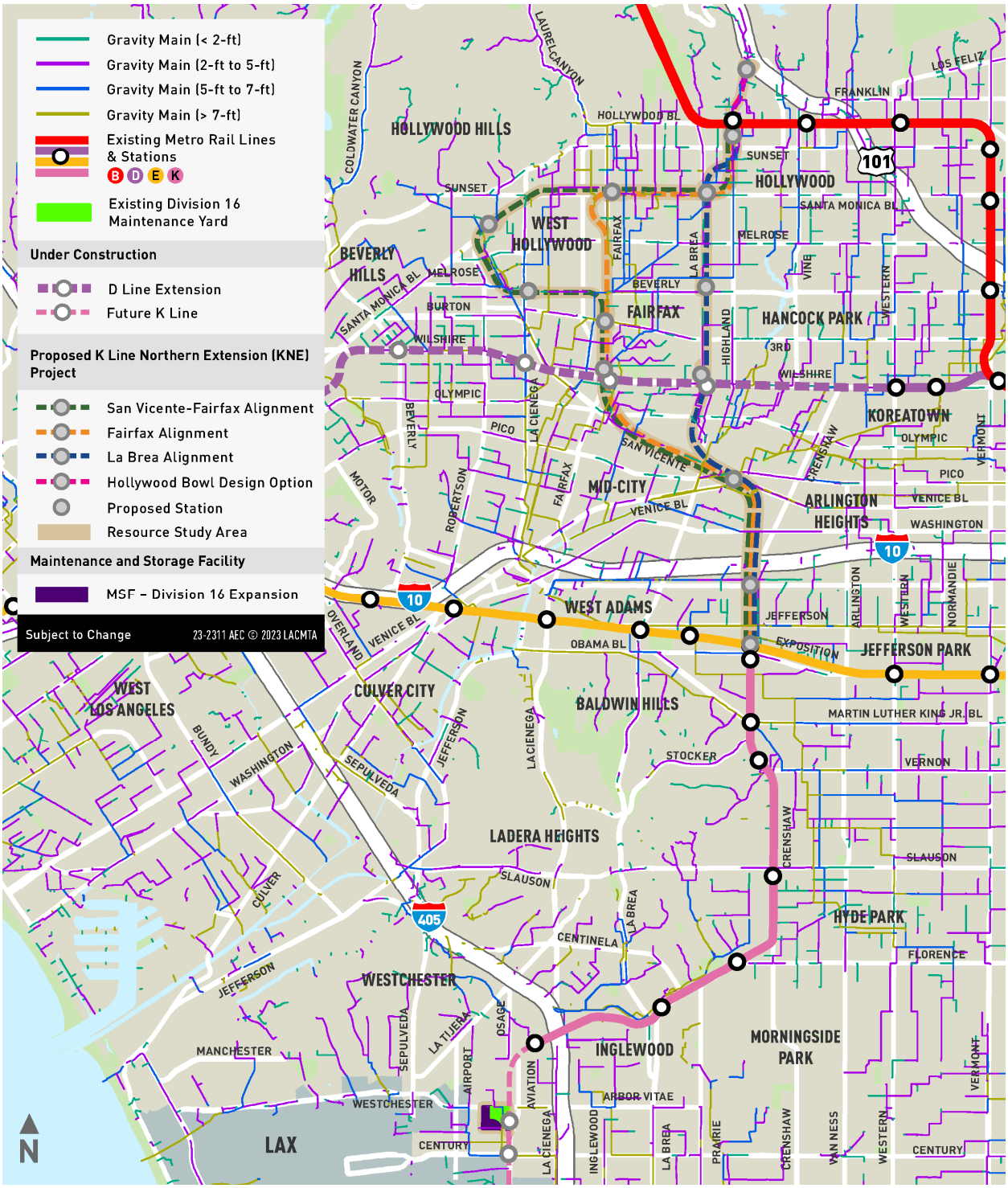
3.12.5.1.3 SURFACE WATER QUALITY

The existing storm drains in the RSA (Figure 3.12-2) ultimately discharge to Reach 1 of Ballona Creek (see Figure 3.12-1 for location of the creek).

Surface runoff from the MSF site discharges to storm drains that outlet to Dominguez Channel, which drains a highly industrialized area with numerous sources of pollution that contribute to poor sediment quality both within the channel and in adjacent Inner Harbor areas (LARWQCB 2019). Ballona Creek Reach 1 (above National Boulevard) and Dominguez Channel (above 135th Street) have multiple beneficial uses (LARWQCB 2019). Both Ballona Creek Reach 1 and Dominguez Channel are impaired water bodies that contain pollutants such as zinc, copper, lead, and trash (LARWQCB 2021).

High Receiving Water Risk Watersheds are sediment-sensitive or have beneficial uses of spawning, reproduction, and/or early development, migration of aquatic organisms, and cold freshwater habitat, none of which are applicable to the Ballona Creek nor Dominguez Channel Watershed. Therefore, none of the watersheds in the RSA are at a high receiving water risk.

FIGURE 3.12-2. REGIONAL STORM DRAIN NETWORK



Source: Metro 2023; Connect Los Angeles Partners 2024

3.12.5.1.4 FLOODPLAINS

Federal Emergency Management Agency (FEMA) issues Flood Insurance Rate Maps to delineate Special Flood Hazard Area (SFHAs), Base Flood Elevations, and insurance risk premium zones. SFHAs are defined as the area that will be inundated by a flood event having a 1 percent chance of being equaled or exceeded in any given year. The 1 percent-annual-chance flood is also referred to as the base flood or 100-year flood. The areas of minimal flood hazard, which are the areas outside the SFHA and higher than the elevation of the 0.2 percent-annual-chance flood, are labeled Zone X (unshaded). Moderate flood hazard areas, labeled Zone X (shaded), are also shown on the Flood Insurance Rate Maps and are the areas between the limits of the base flood and the 0.2 percent-annual-chance (or 500-year) flood.

The RSAs of the alignments that fall within higher flood hazard risk areas include the Midtown Crossing Station and the southern portion of the track alignment between Exposition Boulevard and Jefferson Boulevard (Figure 3.12-3). The SFHA at the Midtown Crossing Station is SFHA Zone AO, which spans 0.8 mile west to 1.9 miles east of the Midtown Crossing Station and is roughly 900 feet in width. SFHA Zone AO signifies this is a river or stream flood hazard area with a 1 percent or greater chance of shallow flooding each year, usually in the form of sheet flow. The average flood depth in this area immediately upstream of Ballona Creek Reach 1 is two to three feet. The SFHA between Exposition Boulevard and Jefferson Boulevard is SFHA Zone AE, with a base flood elevation of 112 feet where the alignments cross the flood zone. The Hollywood Bowl Design Option and the proposed MSF are located fully in Zone X (unshaded), signifying minimal flood hazard risk. Moderate flood hazard areas, Zone X (shaded) locations are summarized in Table 3.12-1.

TABLE 3.12-1. SFHA ZONE X (MODERATE FLOOD HAZARD) LOCATIONS ALONG ALIGNMENTS

LOCATION	SAN VICENTE–FAIRFAX	FAIRFAX	LA BREA
North/South between W Adams Boulevard and W Jefferson Boulevard	X	X	X
North/South between W Washington Boulevard and I-10	X	X	X
La Brea Avenue	X	X	X
3rd Street	X	X	
East/West between La Cienega Boulevard and W San Vicente Boulevard	X		

Source: FEMA National Flood Hazard Layer Viewer, accessed 2023
FEMA = Federal Emergency Management Agency; SFHA = Special Flood Hazard Areas

FIGURE 3.12-3. FEMA FLOOD ZONES

Source: FEMA 2021; Connect Los Angeles Partners 2024

3.12.5.1.5 GROUNDWATER BASINS

As shown in Figure 3.12-4, the RSA is completely located in the Los Angeles Coastal Plain Groundwater Basin and spans three subbasins: Central Subbasin, Hollywood Subbasin, and West Coast Subbasin. The Central Subbasin spans all of the alignments south of Beverly Boulevard. The Hollywood Subbasin spans the Hollywood Bowl Design Option, the portions of the KNE San Vicente–Fairfax and Fairfax Alignments north of 3rd Street, and the portions of the KNE La Brea Alignment north of Beverly Boulevard. The MSF is located in the West Coast Subbasin. The Central Subbasin, Hollywood Subbasin, and West Coast Subbasin have the following beneficial uses: municipal and domestic supply, industrial service supply, industrial process supply, and agricultural supply (California Department of Water Resources [DWR] 2004a, 2004b, 2004c).

The general hydrogeologic setting of the Central Subbasin is grouped into two main aquifer systems: the semi-perched aquifer systems of the Alluvium and the Lakewood Formations and the saturated San Pedro and Fernando Formations. Groundwater table depths vary between 10 feet and 90 feet below ground surface (bgs) along all alignments, 80 feet to 100 feet bgs for the Hollywood Bowl Design Option, and 40 feet bgs for the MSF (Los Angels Bureau of Engineering n.d.).

Historically, groundwater flow in the Central Subbasin has been from recharge areas in the northeast part of the subbasin, toward the Pacific Ocean on the southwest. However, pumping has lowered the water level in the Central Basin (DWR 2004a).

Between the Expo/Crenshaw Station and the Midtown Crossing Station, the Lakewood Formation is relatively shallow. It has similar composition as the overlaying alluvial deposits and similar semi-perched conditions with unsaturated zones. Tar-impacted soils found in the middle of the alignments near Wilshire Boulevard also act as a relatively impermeable layer, trapping groundwater in the overlaying Lakewood Formation.

The general hydrogeologic setting of the Hollywood Subbasin can be characterized by a thicker Lakewood Formation in the northern part of the RSA and south of the Hollywood Fault. Along Santa Monica Boulevard, groundwater appears to be deeper than in the southern portion of the RSA, as many of the boreholes drilled along Santa Monica Boulevard did not encounter groundwater. Unconfined groundwater conditions exist in the shallow aquifers in the northern and eastern portions of the subbasin. In the deeper aquifers and in the remainder of the subbasin, groundwater is confined. Clay deposits separate the aquifers over much of the subbasin.

The general hydrogeologic setting of the West Coast Subbasin is characterized by water-bearing deposits, which include the unconsolidated and semi-consolidated marine and alluvial sediments of the Holocene, Pleistocene, and Pliocene ages. Discharge of groundwater from the subbasin occurs primarily by pumping (DWR 2004c).

FIGURE 3.12-4. GROUNDWATER BASINS

Source: DWR 2004a, 2004b, 2004c; Connect Los Angeles Partners 2024

The DWR prioritizes groundwater basins based on factors such as population, irrigated acreage, and the number of wells that draw from the basin (see Water Code §10933). This is known as basin prioritization. A very low priority signifies no major changes in factors outlined in Water Code §10933 and no need for a groundwater sustainability plan. Both the Central Subbasin and Hollywood Subbasin have very low basin prioritization and do not have associated groundwater sustainability plans (i.e., sustainable groundwater management plans). The West Coast Subbasin is adjudicated, which means the court appointed DWR to serve as Watermaster to account for all water rights and groundwater extraction amounts per year within that subbasin (West Basin Municipal Water District 2023). The adjudication limits the allowable annual extraction of groundwater per water rights holder within the West Coast Subbasin in order to prevent seawater intrusion and an unhealthy groundwater level.

3.12.5.1.6 GROUNDWATER QUALITY

Groundwater quality in the RSA may be affected by areas where there are improperly stored petroleum fuels, solvents, and other constituents of concern. These areas have been identified and are being tracked by the SWRCB. Cleanup projects for additional constituents of concern are tracked by the Department of Toxic Substances Control (DTSC). SWRCB Geotracker lists the status of leaking underground storage tank cleanup sites and cleanup program sites by subbasin; the DTSC EnviroStor database lists the status of all tracked cleanup projects. Open and active cleanup sites in the RSA are shown in Figure 3.12-5. Multiple cleanup sites shown below overlap with Recognized Environmental Condition (REC) sites identified in Section 3.11, Hazards and Hazardous Materials, due to similar potential impacts from hazardous substances or petroleum products. The KNE San Vicente–Fairfax Alignment has 15 open cleanup sites within its RSA (Sites 1 through 13, 27, and 28 on Figure 3.12-5); the KNE Fairfax Alignment has 10 (Sites 1 through 5, 9 through 10, 12, and 27); and the KNE La Brea Alignment has 20 (Sites 1, 2, 8 through 10, 12, and 14 through 27). There are no open cleanup sites in the MSF RSA (SWRCB 2020; DTSC 2024).

FIGURE 3.12-5. OPEN AND ACTIVE CLEANUP SITES

Site No.	Site Name	Address	Source
1	System Cleaners	3631 Crenshaw Bl.	SWRCB
2	Oz Owner, LLC	3000 Crenshaw Bl.	SWRCB
3	Splendid Cleaners	1226 Cochran Av.	SWRCB
4	Danny's Dry Cleaning (Former)	5511-5519 San Vicente Bl.	SWRCB
5	Mas Auto Service	371 Fairfax Av.	SWRCB
6	LACMTA Southern CA RTD	8800 Santa Monica Bl.	SWRCB
7	Canyon Cleaner Facility (Former)	8725 Santa Monica Bl.	SWRCB
8	Bel Air Carwash	1041 La Brea Av.	SWRCB
9	Los Tacos #3	1043 La Brea Av.	SWRCB
10	21st Century Auto Body	1045 La Brea Av.	SWRCB
11	Crescent Shopping Center	8100-8136 Santa Monica Bl.	SWRCB
12	Ba Studio	7144 Santa Monica Bl.	SWRCB
13	Four Seasons Dry Cleaners & Laundry	8042 Santa Monica Bl.	SWRCB
14	Texaco Station (Former)	300 La Brea Av.	SWRCB
15	Continental Graphics Facility (Former)	181 La Brea Av.	SWRCB
16	Continental Graphics Facility (Former)	101N, 101S, 111S La Brea Av.	SWRCB
17	Chevron #9-0726	7020 Beverly Bl.	SWRCB
18	Liberty Car & Truck Rental (Former)	800 La Brea Av.	SWRCB
19	Funk Bros (Former)	843 La Brea Av.	SWRCB
20	Mole Richardson Company	937 Sycamore Av.	SWRCB
21	SoCal Gas	7171 Romaine St.	SWRCB
22	Stonecast Design	1005 La Brea Av.	SWRCB
23	Valley Sound	1023 La Brea Av.	SWRCB
24	Foundation House	1003 La Brea Av.	SWRCB
25	Bellino Property	1037 La Brea Av.	SWRCB
26	Shell #204-3490-0401	1309 La Brea Av.	SWRCB
27	Esquire Quality Cleaners	4356 W. Adams Bl.	DTSC
28	Peter's Magnolia Cleaners	8301 Santa Monica Bl.	DTSC

Source: SWRCB 2020; DTSC 2024; Connect Los Angeles Partners 2024

3.12.6 PROJECT MEASURES

Project measures are design features, best management practices, or other commitments that Metro would implement as part of all proposed alignments, the design option, and the MSF to reduce or avoid environmental effects associated with project construction and operation. Project measures are not the same as mitigation measures, which are used to reduce an environmental impact's significance level. Where applicable, project measures are also discussed in Section 3.12.7 as part of the evaluation of environmental impacts.

3.12.6.1 PM HWQ-1: CONSTRUCTION BEST MANAGEMENT PRACTICES

Construction best management practices (BMPs) include, but shall not be limited to, the following:

- Establishment of an erosion and sediment control plan prior to the initiation of construction activities. The plan shall outline temporary soil stabilization and sediment control BMPs to counter erosion and movement of sediment via wind, vehicles, and dust produced during construction activities. The erosion and sediment control plan may be included as an attachment to the construction SWPPP. Rainfall erosivity risks outlined in the SWPPP can be reduced by limiting the number of rainy seasons associated with the project's construction timeline.
- Development of a SWPPP to comply with all requirements of the Construction General NPDES Permit.
- Dewatering and groundwater disposal in compliance with applicable dewatering permits, including LARWQCB Order No. R4-2023-0429.
- Implementation of drainage and grading plans and treatment control BMPs designed to protect water quality, such as oil/water separators, catch basin inserts, storm drain inserts, media filtration, and catch basin screens.

3.12.6.2 PM HWQ-2: OPERATIONAL BEST MANAGEMENT PRACTICES

Operational BMPs include, but shall not be limited to, the following:

- Implementation of MS4 permit post-construction water quality requirements, low-impact development (LID) standards, and local policies protecting water quality, including design features to reduce impervious surfaces and treatment of stormwater runoff using LID infiltration BMPs such as bioretention facilities or pervious pavement.
- Treatment of pumped groundwater via media filtration BMPs or via a water treatment facility.

3.12.6.3 PM HWQ-3: FLOOD EVENTS (ALIGNMENTS ONLY)

If a flood event occurs in a FEMA flood zone during construction of the project, construction activities shall cease and equipment and materials shall be moved to a safe location outside the floodwaters.

3.12.7 IMPACT EVALUATION AND MITIGATION MEASURES

This analysis presents the construction and operational impacts for hydrologic resources and water quality, as well as any applicable mitigation measures associated with KNE. A summary of the impact conclusions and applicable mitigation measures is found in Table 3.12-2 in Section 3.12.7.7.

3.12.7.1 IMPACT HWQ-1: WATER QUALITY

Impact HWQ-1: Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

3.12.7.1.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.12.7.1.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Along the KNE San Vicente–Fairfax Alignment, erosion and sediment-laden runoff from soil-disturbing construction activities, such as construction vehicles tracking over bare soils, excavation, and grading operations, can affect water quality downstream of disturbed areas. Construction vehicles can contribute pollutants of concern, including oil, grease, and heavy metals, if they are not properly maintained and stored. As required by project measure PM HWQ-1, a construction SWPPP would be prepared to reduce any impacts related to stormwater runoff in compliance with SWRCB's Construction General NPDES Permit.

The groundwater table along the alignment can be as high as 10 feet bgs. Groundwater is likely to be encountered during construction at the Wilshire/Fairfax, Fairfax/3rd, La Cienega/Beverly, San Vicente/Santa Monica, La Brea/Santa Monica, and Hollywood/Highland Stations, which would necessitate dewatering activities and disposal of the collected groundwater. However, project measure PM HWQ-1 requires dewatering and groundwater disposal activities to comply with LARWQCB Order No. R4-2023-0429 (NPDES No. CAG994004); this construction dewatering permit includes limitations on discharge of waste and potentially contaminated groundwater from dewatering activities into surface waters, which could otherwise infiltrate into groundwater. Compliance with this permit would minimize impacts on both surface water quality and groundwater quality.

As described above, with implementation of project measure PM HWQ-1, construction impacts related to water quality standards, waste discharge requirements, and groundwater quality would be avoided or minimized. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.12.7.1.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. The tunnel alignment has eight locations where a sump pump is being considered in preliminary planning to manage groundwater seepage and/or emergency flooding during operation. This tunnel groundwater or floodwater could pick up metals, petroleum products, or byproducts associated with light rail vehicle (LRV) operations. Project measure PM HWQ-2 includes BMPs that would comply with LARWQCB Order No. R4-2023-0429 (NPDES No. CAG994004), which requires these pumped flows to be treated before connecting and comingling with storm drain flows or would require direct routing to a sewer system. With implementation of the post-construction BMPs in project measure PM HWQ-2, operational impacts related to water quality standards, waste discharge requirements, and groundwater quality would be avoided or minimized. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.12.7.1.2 KNE FAIRFAX ALIGNMENT

3.12.7.1.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Along the KNE Fairfax Alignment, erosion and sediment-laden runoff from soil-disturbing construction activities, such as construction vehicles tracking over bare soils, excavation, and grading operations, can affect water quality downstream of disturbed areas. Construction vehicles can contribute pollutants of concern, including oil, grease, and heavy metals, if they are not properly maintained and stored. As required by project measure PM HWQ-1, a construction SWPPP would be prepared to reduce any impacts related to stormwater runoff in compliance with SWRCB's Construction General NPDES Permit.

The groundwater table along the alignment can be as high as 10 feet bgs. Groundwater is likely to be encountered during construction at the Wilshire/Fairfax, Fairfax/3rd, La Brea/Santa Monica, and Hollywood/Highland Stations, which would necessitate dewatering activities and disposal of the collected groundwater. However, project measure PM HWQ-1 requires dewatering and groundwater disposal activities to comply with LARWQCB Order No. R4-2023-0429 (NPDES No. CAG994004); this construction dewatering permit includes limitations on discharge of waste and potentially contaminated groundwater from dewatering activities into surface waters, which could otherwise infiltrate into groundwater. Compliance with this permit would minimize impacts on both surface water quality and groundwater quality.

As described above, with implementation of project measure PM HWQ-1, construction impacts related to water quality standards, waste discharge requirements, and groundwater quality would be avoided or minimized. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.12.7.1.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. The tunnel alignment has five locations where a sump pump is being considered in preliminary planning to manage groundwater seepage and/or emergency flooding during operation. This tunnel groundwater or floodwater could pick up metals, petroleum products, or

byproducts associated with LRV operations. Project measure PM HWQ-2 includes BMPs that would comply with LARWQCB Order No. R4-2023-0429 (NPDES No. CAG994004), which requires these pumped flows to be treated before connecting and comingling with storm drain flows or would require direct routing to a sewer system. With implementation of the post-construction BMPs in project measure PM HWQ-2, operational impacts related to water quality standards, waste discharge requirements, and groundwater quality would be avoided or minimized. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.12.7.1.3 KNE LA BREA ALIGNMENT

3.12.7.1.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Along the KNE La Brea Alignment, erosion and sediment-laden runoff from soil-disturbing construction activities, such as construction vehicles tracking over bare soils, excavation, and grading operations, can affect water quality downstream of disturbed areas. Construction vehicles can contribute pollutants of concern, including oil, grease, and heavy metals, if they are not properly maintained and stored. As required by project measure PM HWQ-1, a construction SWPPP would be prepared to reduce any impacts related to stormwater runoff in compliance with SWRCB's Construction General NPDES Permit.

The groundwater table along the alignment can be as high as 10 feet bgs. Groundwater is likely to be encountered during construction at the Wilshire/La Brea, La Brea/Beverly, La Brea/Santa Monica, and Hollywood/Highland Stations, which would necessitate dewatering activities and disposal of the collected groundwater. However, project measure PM HWQ-1 requires dewatering and groundwater disposal activities to comply with LARWQCB Order No. R4-2023-0429 (NPDES No. CAG994004); this construction dewatering permit includes limitations on discharge of waste and potentially contaminated groundwater from dewatering activities into surface waters, which could otherwise infiltrate into groundwater. Compliance with this permit would minimize impacts on both surface water quality and groundwater quality.

As described above, with implementation of project measure PM HWQ-1, construction impacts related to water quality standards, waste discharge requirements, and groundwater quality would be avoided or minimized. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.12.7.1.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. The tunnel alignment has four locations where a sump pump is being considered in preliminary planning to manage groundwater seepage and/or emergency flooding during operation. This tunnel groundwater or floodwater could pick up metals, petroleum products, or byproducts associated with LRV operations. Project measure PM HWQ-2 includes BMPs that would comply with LARWQCB Order No. R4-2023-0429 (NPDES No. CAG994004), which requires these pumped flows to be treated before connecting and comingling with storm drain flows or would require direct routing to a sewer system. With implementation of the post-construction BMPs in project measure PM HWQ-2, operational impacts related to water quality standards, waste discharge requirements, and

groundwater quality would be avoided or minimized. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.12.7.1.4 HOLLYWOOD BOWL DESIGN OPTION

3.12.7.1.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Along the Hollywood Bowl Design Option underground alignment and station, erosion and sediment-laden runoff from soil-disturbing construction activities, such as construction vehicle tracking over bare soils, excavation, and grading operations, can affect water quality downstream of disturbed areas. Construction vehicles can contribute pollutants of concerns such as oil, grease, and heavy metals if not properly maintained and stored. As required by PM HWQ-1, a construction SWPPP would be prepared to reduce any potential impacts related to stormwater runoff in compliance with SWRCB's Construction General NPDES Permit.

The groundwater table along the Hollywood Bowl Design Option is 90 feet bgs, and the maximum depth to the bottom of the proposed tunnel is roughly 110 feet bgs. Groundwater is likely to be encountered during construction of the Hollywood Bowl Design Option.

As described above, with implementation of project measure PM HWQ-1, construction impacts related to water quality standards, waste discharge requirements, and groundwater quality would be avoided or minimized. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.12.7.1.4.2 OPERATIONAL IMPACTS

No Impact. The Hollywood Bowl Design Option tunnel alignment would not have sumps; therefore, it would have no impact during operation.

3.12.7.1.5 MAINTENANCE AND STORAGE FACILITY

3.12.7.1.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. For the MSF, erosion and sediment-laden runoff from soil-disturbing construction activities, such as construction vehicle tracking over bare soils, excavation, and grading operations, can affect water quality downstream of disturbed areas. Construction vehicles can contribute pollutants of concerns, such as oil, grease, and heavy metals, if not properly maintained and stored. As required by project measure PM HWQ-1, a construction SWPPP would be prepared to reduce any impacts related to stormwater runoff in compliance with SWRCB's Construction General NPDES Permit. Therefore, the MSF would have a less than significant impact during construction.

3.12.7.1.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operational activities at the MSF site would include, but would not be limited to, dismantling, storing, lubricating, maintaining, painting, and/or washing of LRVs and equipment. Stormwater discharge and authorized non-stormwater discharges associated with these industrial

activities could affect water quality and, therefore, are regulated by the IGP. Operation of the MSF would comply with applicable permits and post-construction BMPs required by these permits and as set forth in project measure PM HWQ-2. Therefore, the MSF would have a less than significant impact during operation.

3.12.7.2 IMPACT HWQ-2: GROUNDWATER SUPPLIES AND RECHARGE

Impact HWQ-2: Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

3.12.7.2.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.12.7.2.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The groundwater table in the KNE San Vicente–Fairfax Alignment RSA can be as high as 10 feet bgs, so groundwater is likely to be encountered during excavation activities associated with tunnel and station construction. Construction of tunnels and stations below the water table may require temporary dewatering, which could cause temporary impacts on groundwater supplies and recharge. The volume of temporary dewatering during construction would be limited to the tunnels and dewatering shafts, which is insignificant given the scale of the groundwater basin and its associated storage volume. As part of project measure PM HWQ-1, dewatering and disposal of groundwater would be tested and properly disposed under LARWQCB Order No. R4-2023-0429. Groundwater recharge to the groundwater basins would not be impeded by tunnel and station construction. Based on this analysis, construction activities associated with the alignment would not substantially decrease groundwater supplies or interfere with groundwater recharge such that the project may impede sustainable groundwater management of the basins. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.12.7.2.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. The KNE San Vicente–Fairfax Alignment would not include operational phase groundwater extraction so it would not decrease groundwater supplies. The RSA is not located within identified groundwater recharge areas or basins and is primarily covered with impervious surfaces, which prevents surface water from percolating to groundwater. The tunnel would not change existing surface cover or groundwater recharge capabilities, and there would be minimal to no increase in impervious surfaces associated with station entrances. As a result, the alignment would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.12.7.2.2 KNE FAIRFAX ALIGNMENT

3.12.7.2.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The groundwater table in the KNE Fairfax Alignment RSA can be as high as 10 feet bgs, so groundwater is likely to be encountered during excavation activities associated with tunnel and station construction. Construction of tunnels and stations below the water table may require temporary dewatering, which could cause temporary impacts on groundwater supplies and recharge. The volume of temporary dewatering during construction would be limited to the tunnels and dewatering shafts, which is insignificant given the scale of the groundwater basin and its associated storage volume. As part of project measure PM HWQ-1, dewatering and disposal of groundwater would be tested and properly disposed under LARWQCB Order No. R4-2023-0429. Groundwater recharge to the groundwater basins would not be impeded by tunnel and station construction. Based on this analysis, construction activities associated with the alignment would not substantially decrease groundwater supplies or interfere with groundwater recharge such that the project may impede sustainable groundwater management of the basins. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.12.7.2.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. The KNE Fairfax Alignment would not include operational phase groundwater extraction, so it would not decrease groundwater supplies. The RSA is not located within identified groundwater recharge areas or basins and is primarily covered with impervious surfaces, which prevents surface water from percolating to groundwater. The tunnel would not change existing surface cover or groundwater recharge capabilities, and there would be minimal to no increase in impervious surfaces associated with station entrances. As a result, the alignment would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.12.7.2.3 KNE LA BREA ALIGNMENT

3.12.7.2.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The groundwater table in the KNE La Brea Alignment RSA can be as high as 10 feet bgs, so groundwater is likely to be encountered during excavation activities associated with tunnel and station construction. Construction of tunnels and stations below the water table may require temporary dewatering, which could cause temporary impacts on groundwater supplies and recharge. The volume of temporary dewatering during construction would be limited to the tunnels and dewatering shafts, which is insignificant given the scale of the groundwater basin and its associated storage volume. As part of project measure PM HWQ-1, dewatering and disposal of groundwater would be tested and properly disposed under LARWQCB Order No. R4-2023-0429. Groundwater recharge to the groundwater basins would not be impeded by tunnel and station construction. Based on this analysis, construction activities associated with the alignment would not substantially decrease groundwater supplies or

interfere with groundwater recharge such that the project may impede sustainable groundwater management of the basins. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.12.7.2.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. The KNE La Brea Alignment would not include operational phase groundwater extraction, so it would not decrease groundwater supplies. The RSA is not located within identified groundwater recharge areas or basins and is primarily covered with impervious surfaces, which prevents surface water from percolating to groundwater. The tunnel would not change existing surface cover or groundwater recharge capabilities, and there would be minimal to no increase in impervious surfaces associated with station entrances. As a result, the alignment would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.12.7.2.4 HOLLYWOOD BOWL DESIGN OPTION

3.12.7.2.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The groundwater table in the Hollywood Bowl Design Option RSA can be as high as 90 feet bgs, and the maximum depth to the bottom of the proposed tunnel is roughly 110 feet bgs. As a result, groundwater is likely to be encountered. Construction of the tunnel alignment and connecting stations below the water table may require temporary dewatering, which could cause temporary impacts on groundwater supplies and recharge. The volume of temporary dewatering during construction would be limited to the tunnel and dewatering shaft, which is insignificant given the scale of the groundwater basin and its associated storage volume. As part of PM HWQ-1, groundwater would be tested and properly disposed under LARWQCB Order No. R4-2018-0125. Groundwater recharge to the groundwater basins would not be impeded. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.12.7.2.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. The Hollywood Bowl Design Option would not include operational phase groundwater extraction, so it would not decrease groundwater supplies. Operation of the tunnel alignment and station for the Hollywood Bowl Design Option would not change existing surface cover or groundwater recharge capabilities. The RSA for the Hollywood Bowl Design Option is not located within identified groundwater recharge areas or basins and are primarily covered with impervious surfaces, which prevents surface water from percolating to groundwater. There would be minimal to no increase in impervious surfaces associated with station entrance construction. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.12.7.2.5 MAINTENANCE AND STORAGE FACILITY

3.12.7.2.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The MSF RSA is located within the West Coast Subbasin and has highly impervious existing surface cover. Construction of the MSF would require demolition of existing paved surfaces; final grading and paving would be shown on the final design plan. The finished grades are anticipated to be near existing grade (Metro 2023). The groundwater table in the RSA is estimated to be 40 feet bgs, so substantial groundwater dewatering is not anticipated. As a result, construction would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. Therefore, the MSF would have a less than significant impact during construction.

3.12.7.2.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. The MSF RSA is located within the West Coast Subbasin and has highly impervious existing surface cover. Operational activities would not change the amount of impervious surface cover or include groundwater withdrawal from the adjudicated West Coast Subbasin. As a result, operation would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. Therefore, the MSF would have a less than significant impact during operation.

3.12.7.3 IMPACT HWQ-3: DRAINAGE PATTERNS

Impact HWQ-3: Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a matter which would:

i. result in substantial erosion or siltation on or off site;
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;
iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
iv. impede or redirect flood flows.

3.12.7.3.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.12.7.3.1.1 CONSTRUCTION IMPACTS

The subsections below describe construction impacts on drainage patterns related to erosion and siltation, surface runoff, stormwater drainage, and flood flows.

EROSION AND SILTATION

Less than Significant Impact. Soil-disturbing construction activities associated with the KNE San Vicente–Fairfax Alignment could cause erosion and siltation. The cut-and-cover construction methods at some construction staging locations could lead to erosion on- or off-site. For instance, demolition of ground surfaces would expose underlaying soils that must be stabilized during construction and during rain events. Smaller-scale construction activities, such as trenching for relocation of utilities and storm drains and demolishing sidewalks, curbs, and gutters for relocation, would also result in potential erosion and siltation. However, project measure PM HWQ-1 requires development of a SWPPP, which would include construction BMPs to minimize or avoid erosion and siltation. Common construction practices include use of erosion control blankets or application of mulch to stabilize disturbed surfaces and the use of silt fences to prevent silt from leaving the project limits. In addition, construction of the alignment would not substantially alter the existing drainage pattern in the RSA, and there are no rivers or streams in the RSA. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

SURFACE RUNOFF

Less than Significant Impact. Most construction activities associated with the KNE San Vicente–Fairfax Alignment would occur below the ground surface, and the surface construction associated with stations would be limited to a small area, so there would be a minimal increase in impervious surface area during construction. Detention- or retention-based stormwater quality control measures may be used in the RSA where feasible to comply with LID requirements (Metro 2023) and to address the minimal increases in impervious surface area that would be associated with staging and equipment/truck access. Catch basins or other collection devices might be modified within the station RSAs, but they would be sized and placed appropriately to avoid substantially changing existing drainage patterns. In addition, construction would not substantially alter the existing drainage pattern in the RSA, and there are no rivers or streams in the RSA. Based upon this analysis, construction of the alignment would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

STORMWATER DRAINAGE

Less than Significant Impact. The tunnel alignment would physically affect four storm drains at the Midtown Crossing Station, two storm drains at the La Cienega/Beverly Station, four storm drains at the San Vicente/Santa Monica Station, and one storm drain at the Fairfax/Santa Monica Station. The City of Los Angeles owns three of these storm drains and Los Angeles County owns the remaining eight, which would necessitate coordination with city and county staff. These conflicts with the tunnel alignment could require rerouting of the storm drains (see Section 3.18, Utilities and Service Systems). However, the storm drains would ultimately connect back into existing systems, so the changes would not have an impact on flow or on the capacity of the stormwater drainage infrastructure. Furthermore, project measure PM HWQ-1 would require the contractor to implement construction BMPs outlined in the SWPPP, which would prevent pollution of stormwater runoff. In addition, construction would not substantially alter the existing drainage pattern in the RSA, and there are no rivers or streams in the RSA.

Based on this analysis, construction of the alignment would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

FLOOD FLOWS

Less than Significant Impact. The KNE San Vicente–Fairfax Alignment RSA includes portions within FEMA 100-year and 500-year flood zones. In areas outside of both flood zone categories, there is minimal flood risk during construction; therefore, there is little risk that construction in these areas would impede or redirect flow. Also, due to the underground profile of much of the alignment, construction through areas designated as 100-year and 500-year flood zones would only be a concern where cut-and-cover construction would occur at stations. However, the Crenshaw/Adams, Midtown Crossing, Fairfax/3rd, La Cienega/Beverly, and the San Vicente/Santa Monica Stations would be built during dry weather as feasible and have BMPs in place during wet-weather construction to minimize the potential for temporary flooding impacts during construction. As required by project measure PM HWQ-3, if a flood event occurs in a FEMA flood zone, construction activities shall cease, and equipment and materials shall be moved to a safe location outside the floodwaters. In addition, construction would not substantially alter the existing drainage pattern in the RSA, and there are no rivers or streams in the RSA. Based on this analysis, construction would not impede or redirect flood flows. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

DRAINAGE PATTERN CONSTRUCTION IMPACT CONCLUSION

Less than Significant Impact. Based on the impacts described in the subsections above, construction of the KNE San Vicente–Fairfax Alignment would not substantially alter the existing drainage pattern of the site or area, and, overall, it would have a less than significant impact during construction.

3.12.7.3.1.2 OPERATIONAL IMPACTS

The subsections below describe operational impacts on drainage patterns related to erosion and siltation, surface runoff, stormwater drainage, and flood flows.

EROSION AND SILTATION

Less than Significant Impact. Erosion and siltation during operation of the KNE San Vicente–Fairfax Alignment would stem from exposed or unstabilized earthen surfaces around the station entrances; no erosion or siltation would occur at the tunnels because they are fully underground. Post-construction BMPs to minimize erosion and siltation around the station entrances are set forth in project measure PM HWQ-2. In addition, operational activities would not substantially alter the existing drainage pattern in the RSA, and there are no rivers or streams in the RSA. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

SURFACE RUNOFF

Less than Significant Impact. Surface runoff during operation of the KNE San Vicente–Fairfax Alignment would occur in the areas surrounding the station entrances at the surface; all other operations would be underground. Post-development BMPs set forth in project measure PM HWQ-2 to capture surface runoff would ensure no substantial increase in the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

STORMWATER DRAINAGE

Less than Significant Impact. Operation of the KNE San Vicente–Fairfax Alignment would comply with post-construction measures in applicable NPDES permits, LID standards, and local policies protecting water quality. Post-construction BMPs are set forth in project measure PM HWQ-2. Operation of the alignment would not exceed the capacity of existing or planned stormwater drainage systems, nor provide substantial additional sources of polluted runoff. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

FLOOD FLOWS

Less than Significant Impact. Operation of the KNE San Vicente–Fairfax Alignment would impede or redirect flows if existing drainage patterns are significantly changed or if there are additional flows within the station footprints or tunneled alignment. Post-development BMPs set forth in project measure PM HWQ-2 to capture surface runoff would ensure no substantial increase in the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. Requirements for pumping flows collected at sump locations in the tunnel are set forth in project measure PM HWQ-2 to ensure no flooding would occur in the tunnel. Based on this analysis, operation of the alignment would not impede or redirect flood flows. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

DRAINAGE PATTERN OPERATIONAL IMPACT CONCLUSION

Less than Significant Impact. Based on the impacts described in the subsections above, operation of the KNE San Vicente–Fairfax Alignment would not substantially alter the existing drainage pattern of the site or area, and, overall, it would have a less than significant impact during operation.

3.12.7.3.2 KNE FAIRFAX ALIGNMENT

3.12.7.3.2.1 CONSTRUCTION IMPACTS

The subsections below describe construction impacts on drainage patterns related to erosion and siltation, surface runoff, stormwater drainage, and flood flows.

EROSION AND SILTATION

Less than Significant Impact. Soil-disturbing construction activities associated with the KNE Fairfax Alignment could cause erosion and siltation. The cut-and-cover construction methods at some construction staging locations could lead to erosion on- or off-site. For instance, demolition of ground surfaces would expose underlaying soils that must be stabilized during construction and during rain events. Smaller-scale construction activities, such as trenching for relocation of utilities and storm drains and demolishing sidewalks, curbs, and gutters for relocation, would also result in potential erosion and siltation. However, project measure PM HWQ-1 requires development of a SWPPP, which would include construction BMPs to minimize or avoid erosion and siltation. Common construction practices include use of erosion control blankets or application of mulch to stabilize disturbed surfaces and the use of silt fences to prevent silt from leaving the project limits. In addition, construction of the alignment would not substantially alter the existing drainage pattern in the RSA, and there are no rivers or streams in the RSA. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

SURFACE RUNOFF

Less than Significant Impact. Most construction activities associated with the KNE Fairfax Alignment would occur below the ground surface, and the surface construction associated with stations would be limited to a small area, so there would be a minimal increase in impervious surface area during construction. Detention- or retention-based stormwater quality control measures may be used in the RSA where feasible to comply with LID requirements (Metro 2023) and to address the minimal increases in impervious surface area that would be associated with staging and equipment/truck access. Catch basins or other collection devices might be modified within the station RSAs, but they would be sized and placed appropriately to avoid substantially changing existing drainage patterns. In addition, construction would not substantially alter the existing drainage pattern in the RSA, and there are no rivers or streams in the RSA. Based upon this analysis, construction of the alignment would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

STORMWATER DRAINAGE

Less than Significant Impact. The tunnel alignment would physically affect four storm drains at the Midtown Crossing Station and one storm drain at the Fairfax/Santa Monica Station. The City of Los Angeles owns two of these storm drains and Los Angeles County owns the remaining three, which would necessitate coordination with city and county staff. These conflicts with the tunnel alignment could require rerouting of the storm drains (see Section 3.18, Utilities and Service Systems). However, the storm drains would ultimately connect back into existing systems, so the changes would not have an impact on flow or on the capacity of the stormwater drainage infrastructure. Furthermore, project measure PM HWQ-1 would require the contractor to implement construction BMPs outlined in the SWPPP, which would prevent pollution of stormwater runoff. In addition, construction would not substantially alter the existing drainage pattern in the RSA, and there are no rivers or streams in the RSA. Based on this analysis, construction of the alignment would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial

additional sources of polluted runoff. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

FLOOD FLOWS

Less than Significant Impact. The KNE Fairfax Alignment RSA includes portions within FEMA 100-year and 500-year flood zones. In areas outside of both flood zone categories, there is minimal flood risk during construction; therefore, there is little risk that construction in these areas would impede or redirect flow. Also, due to the underground profile of much of the alignment, construction through areas designated as 100-year and 500-year flood zones would only be a concern where cut-and-cover construction would occur at stations.

For the KNE Fairfax Alignment, the Crenshaw/Adams, Midtown Crossing, and Fairfax/3rd Stations would be built during dry weather as feasible, with BMPs in place during wet-weather construction to minimize the potential for temporary flooding impacts during construction. As required by project measure PM HWQ-3, if a flood event occurs in a FEMA flood zone, construction activities shall cease, and equipment and materials shall be moved to a safe location outside the floodwaters. In addition, construction would not substantially alter the existing drainage pattern in the RSA, and there are no rivers or streams in the RSA. Based on this analysis, construction would not impede or redirect flood flows. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

DRAINAGE PATTERN CONSTRUCTION IMPACT CONCLUSION

Less than Significant Impact. Based on the impacts described in the subsections above, construction of the KNE Fairfax Alignment would not substantially alter the existing drainage pattern of the site or area, and, overall, it would have a less than significant impact during construction.

3.12.7.3.2.2 OPERATIONAL IMPACTS

EROSION AND SILTATION

Less than Significant Impact. Erosion and siltation during operation of the KNE Fairfax Alignment would stem from exposed or unstabilized earthen surfaces around the station entrances; no erosion or siltation would occur at the tunnels because they are fully underground. Post-construction BMPs to minimize erosion and siltation around the station entrances are set forth in project measure PM HWQ-2. In addition, operational activities would not substantially alter the existing drainage pattern in the RSA, and there are no rivers or streams in the RSA. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

SURFACE RUNOFF

Less than Significant Impact. Surface runoff during operation of the KNE Fairfax Alignment would occur in the areas surrounding the station entrances at the surface; all other operations would be underground. Post-development BMPs set forth in project measure PM HWQ-2 to capture surface runoff would ensure no substantial increase in the rate or amount of surface runoff in a manner that would result in flooding

on- or off-site. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

STORMWATER DRAINAGE

Less than Significant Impact. Operation of the KNE Fairfax Alignment would comply with post-construction measures in applicable NPDES permits, LID standards, and local policies protecting water quality. Post-construction BMPs are set forth in project measure PM HWQ-2. Operation of the alignment would not exceed the capacity of existing or planned stormwater drainage systems, nor provide substantial additional sources of polluted runoff. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

FLOOD FLOWS

Less than Significant Impact. Operation of the KNE Fairfax Alignment would impede or redirect flows if existing drainage patterns are significantly changed or if there are additional flows within the station footprints or tunneled alignment. Post-development BMPs set forth in project measure PM HWQ-2 to capture surface runoff would ensure no substantial increase in the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. Requirements for pumping flows collected at sump locations in the tunnel are set forth in project measure PM HWQ-2 to ensure no flooding would occur in the tunnel. Based on this analysis, operation of the alignment would not impede or redirect flood flows. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

DRAINAGE PATTERN OPERATIONAL IMPACT CONCLUSION

Less than Significant Impact. Based on the impacts described in the subsections above, operation of the KNE Fairfax Alignment would not substantially alter the existing drainage pattern of the site or area, and, overall, it would have a less than significant impact during operation.

3.12.7.3.3 KNE LA BREA ALIGNMENT

3.12.7.3.3.1 CONSTRUCTION IMPACTS

The subsections below describe construction impacts on drainage patterns related to erosion and siltation, surface runoff, stormwater drainage, and flood flows.

EROSION AND SILTATION

Less than Significant Impact. Soil-disturbing construction activities associated with the KNE La Brea Alignment could cause erosion and siltation. The cut-and-cover construction methods at some construction staging locations could lead to erosion on- or off-site. For instance, demolition of ground surfaces would expose underlaying soils that must be stabilized during construction and during rain events. Smaller-scale construction activities, such as trenching for relocation of utilities and storm drains and demolishing sidewalks, curbs, and gutters for relocation, would also result in potential erosion and siltation. However, project measure PM HWQ-1 requires development of a SWPPP, which would include

construction BMPs to minimize or avoid erosion and siltation. Common construction practices include use of erosion control blankets or application of mulch to stabilize disturbed surfaces and the use of silt fences to prevent silt from leaving the project limits. In addition, construction of the alignment would not substantially alter the existing drainage pattern in the RSA, and there are no rivers or streams in the RSA. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

SURFACE RUNOFF

Less than Significant Impact. Most construction activities associated with the KNE La Brea Alignment would occur below the ground surface, and the surface construction associated with stations would be limited to a small area, so there would be a minimal increase in impervious surface area during construction. Detention- or retention-based stormwater quality control measures may be used in the RSA where feasible to comply with LID requirements (Metro 2023) and to address the minimal increases in impervious surface area that would be associated with staging and equipment/truck access. Catch basins or other collection devices might be modified within the station RSAs, but they would be sized and placed appropriately to avoid substantially changing existing drainage patterns. In addition, construction would not substantially alter the existing drainage pattern in the RSA, and there are no rivers or streams in the RSA. Based upon this analysis, construction of the alignment would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

STORMWATER DRAINAGE

Less than Significant Impact. The tunnel alignment would physically affect four storm drains at the Midtown Crossing Station, three storm drains at the Wilshire/La Brea Station, and one storm drain at the La Brea/Beverly Station. The City of Los Angeles owns five of these storm drains and Los Angeles County owns the remaining three, which would necessitate coordination with city and county staff. These conflicts with the tunnel alignment could require rerouting of the storm drains (see Section 3.18, Utilities and Service Systems). However, the storm drains would ultimately connect back into existing systems, so the changes would not have an impact on flow or on the capacity of the stormwater drainage infrastructure. Furthermore, project measure PM HWQ-1 would require the contractor to implement construction BMPs outlined in the SWPPP, which would prevent pollution of stormwater runoff. In addition, construction would not substantially alter the existing drainage pattern in the RSA, and there are no rivers or streams in the RSA. Based on this analysis, construction of the alignment would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

FLOOD FLOWS

Less than Significant Impact. The KNE La Brea Alignment RSA includes portions within FEMA 100-year and 500-year flood zones. In areas outside of both flood zone categories, there is minimal flood risk during construction; therefore, there is little risk that construction in these areas would impede or redirect flow. Also, due to the underground profile of much of the alignment, construction through areas designated as

100-year and 500-year flood zones would only be a concern where cut-and-cover construction would occur at stations.

For the KNE La Brea Alignment, the Crenshaw/Adams and the Midtown Crossing Stations would be built during dry weather as feasible, with BMPs in place during wet-weather construction to minimize the potential for temporary flooding impacts associated during construction. As required by project measure PM HWQ-3, if a flood event occurs in a FEMA flood zone, construction activities shall cease, and equipment and materials shall be moved to a safe location outside the floodwaters. In addition, construction would not substantially alter the existing drainage pattern in the RSA, and there are no rivers or streams in the RSA. Based on this analysis, construction would not impede or redirect flood flows. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

DRAINAGE PATTERN CONSTRUCTION IMPACT CONCLUSION

Less than Significant Impact. Based on the impacts described in the subsections above, construction of the KNE La Brea Alignment would not substantially alter the existing drainage pattern of the site or area, and, overall, it would have a less than significant impact during construction.

3.12.7.3.3.2 OPERATIONAL IMPACTS

EROSION AND SILTATION

Less than Significant Impact. Erosion and siltation during operation of the KNE La Brea Alignment would stem from exposed or unstabilized earthen surfaces around the station entrances; no erosion or siltation would occur at the tunnels because they are fully underground. Post-construction BMPs to minimize erosion and siltation around the station entrances are set forth in project measure PM HWQ-2. In addition, operational activities would not substantially alter the existing drainage pattern in the RSA, and there are no rivers or streams in the RSA. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

SURFACE RUNOFF

Less than Significant Impact. Surface runoff during operation of the KNE La Brea Alignment would occur in the areas surrounding the station entrances at the surface; all other operations would be underground. Post-development BMPs set forth in project measure PM HWQ-2 to capture surface runoff would ensure no substantial increase in the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

STORMWATER DRAINAGE

Less than Significant Impact. Operation of the KNE La Brea Alignment would comply with post-construction measures in applicable NPDES permits, LID standards, and local policies protecting water quality. Post-construction BMPs are set forth in project measure PM HWQ-2. Operation of the alignment would not exceed the capacity of existing or planned stormwater drainage systems, nor provide

substantial additional sources of polluted runoff. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

FLOOD FLOWS

Less than Significant Impact. Operation of the KNE La Brea Alignment would impede or redirect flows if existing drainage patterns are significantly changed or if there are additional flows within the station footprints or tunneled alignment. Post-development BMPs set forth in project measure PM HWQ-2 to capture surface runoff would ensure no substantial increase in the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. Requirements for pumping flows collected at sump locations in the tunnel are set forth in project measure PM HWQ-2 to ensure no flooding would occur in the tunnel. Based on this analysis, operation of the alignment would not impede or redirect flood flows. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

DRAINAGE PATTERN OPERATIONAL IMPACT CONCLUSION

Less than Significant Impact. Based on the impacts described in the subsections above, operation of the KNE La Brea Alignment would not substantially alter the existing drainage pattern of the site or area, and, overall, it would have a less than significant impact during operation.

3.12.7.3.4 HOLLYWOOD BOWL DESIGN OPTION

3.12.7.3.4.1 CONSTRUCTION IMPACTS

The subsections below describe construction impacts on drainage patterns related to erosion and siltation, surface runoff, stormwater drainage, and flood flows.

EROSION AND SILTATION

Less than Significant Impact. Soil-disturbing construction activities associated with the Hollywood Bowl Design Option could cause erosion and siltation. The cut-and-cover construction methods at some construction staging locations could lead to erosion on- or off-site. For instance, demolition of ground surfaces would expose underlaying soils that must be stabilized during construction and during rain events. Smaller-scale construction activities, such as trenching for relocation of utilities and storm drains and demolishing sidewalks, curbs, and gutters for relocation, would also result in potential erosion and siltation. However, project measure PM HWQ-1 requires development of a SWPPP, which would include construction BMPs to minimize or avoid erosion and siltation. Common construction practices include use of erosion control blankets or application of mulch to stabilize disturbed surfaces and the use of silt fences to prevent silt from leaving the project limits. In addition, construction of the alignment would not substantially alter the existing drainage pattern in the RSA, and there are no rivers or streams in the RSA. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

SURFACE RUNOFF

Less than Significant Impact. Most construction activities associated with the Hollywood Bowl Design Option would occur below the ground surface, and the surface construction associated with stations would be limited to a small area, so there would be a minimal increase in impervious surface area during construction. Detention- or retention-based stormwater quality control measures may be used in the RSA where feasible to comply with LID requirements (Metro 2023) and to address the minimal increases in impervious surface area that would be associated with staging and equipment/truck access. Catch basins or other collection devices might be modified within the station RSAs, but they would be sized and placed appropriately to avoid substantially changing existing drainage patterns. In addition, construction would not substantially alter the existing drainage pattern in the RSA, and there are no rivers or streams in the RSA. Based upon this analysis, construction of the design option would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

STORMWATER DRAINAGE

Less than Significant Impact. No physical conflicts between existing storm drains and the Hollywood Bowl Design Option tunnel alignment are anticipated. The contractor is required to use the construction BMPs outlined in the SWPPP to prevent pollution of stormwater runoff, as discussed in project measure PM HWQ-1. Thus, construction of the design option would not exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

FLOOD FLOWS

No Impact. The Hollywood Bowl Design Option is completely outside both the 100-year and 500-year flood zones. In areas outside of both flood zone categories, there is minimal flood risk during construction; therefore, there is little risk that construction in these areas would impede or redirect flow. In addition, construction of the design option would not substantially alter the existing drainage pattern in the RSA, and there are no rivers or streams in the RSA. Based on this analysis, construction of the design option would not impede or redirect flood flows. Therefore, the Hollywood Bowl Design Option would have no impact during construction.

DRAINAGE PATTERN CONSTRUCTION IMPACT CONCLUSION

Less than Significant Impact. Based on the impacts described in the subsections above, construction of the Hollywood Bowl Design Option would not substantially alter the existing drainage pattern of the site or area, and, overall, it would have a less than significant impact during construction.

3.12.7.3.4.2 OPERATIONAL IMPACTS

EROSION AND SILTATION

Less than Significant Impact. Erosion and siltation during operation of the Hollywood Bowl Design Option would stem from exposed or unstabilized earthen surfaces around the station entrances; no erosion or siltation would occur at the tunnels because they are fully underground. Post-construction BMPs to minimize erosion and siltation around the station entrances are set forth in project measure PM HWQ-2. In addition, operational activities would not substantially alter the existing drainage pattern in the RSA, and there are no rivers or streams in the RSA. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

SURFACE RUNOFF

Less than Significant Impact. Surface runoff during operation of the Hollywood Bowl Design Option would occur in the areas surrounding the station entrances at the surface; all other operations would be underground. Post-development BMPs set forth in project measure PM HWQ-2 to capture surface runoff would ensure no substantial increase in the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

STORMWATER DRAINAGE

Less than Significant Impact. Operation of the Hollywood Bowl Design Option would comply with post-construction measures in applicable NPDES permits, LID standards, and local policies protecting water quality. Post-construction BMPs are set forth in project measure PM HWQ-2. Operation of the design option would not exceed the capacity of existing or planned stormwater drainage systems, nor provide substantial additional sources of polluted runoff. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

FLOOD FLOWS

Less than Significant Impact. Operation of the Hollywood Bowl Design Option would impede or redirect flows if existing drainage patterns are significantly changed or if there are additional flows within the station footprint or tunneled alignment. Post-development BMPs set forth in project measure PM HWQ-2 to capture surface runoff would ensure no substantial increase in the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. Requirements for pumping flows collected at sump locations in the tunnel are set forth in project measure PM HWQ-2 to ensure no flooding would occur in the tunnel. Based on this analysis, operation of the design option would not impede or redirect flood flows. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

DRAINAGE PATTERN OPERATIONAL IMPACT CONCLUSION

Less than Significant Impact. Based on the impacts described in the subsections above, operation of the Hollywood Bowl Design Option would not substantially alter the existing drainage pattern of the site or area, and, overall, it would have a less than significant impact during operation.

3.12.7.3.5 MAINTENANCE AND STORAGE FACILITY

3.12.7.3.5.1 CONSTRUCTION IMPACTS

The subsections below describe construction impacts on drainage patterns related to erosion and siltation, surface runoff, stormwater drainage, and flood flows.

EROSION AND SILTATION

Less than Significant Impact. Soil-disturbing construction activities associated with the MSF could cause erosion and siltation. The surface grading of the MSF could lead to erosion on- or off-site. For instance, demolition of ground surfaces would expose underlaying soils that must be stabilized during construction and during rain events. Smaller-scale construction activities, such as trenching for relocation of utilities and storm drains and demolishing sidewalks, curbs, and gutters for relocation, would also result in potential erosion and siltation. However, project measure PM HWQ-1 requires development of a SWPPP, which would include construction BMPs to minimize or avoid erosion and siltation. Common construction practices include use of erosion control blankets or application of mulch to stabilize disturbed surfaces and the use of silt fences to prevent silt from leaving the project limits. In addition, construction of the MSF would not substantially alter the existing drainage pattern in the RSA, and there are no rivers or streams in the RSA. Therefore, the MSF would have a less than significant impact during construction.

SURFACE RUNOFF

Less than Significant Impact. Most construction activities associated with the MSF would occur above the ground surface, and the surface construction would include grading and a return to the existing impervious land cover condition. Overall, there would be an increase in impervious surface area during construction. Detention- or retention-based stormwater quality control measures may be used where feasible to comply with LID requirements (Metro 2023) and to address the increases in impervious surface area that would be associated with staging and equipment/truck access or final land cover. Catch basins or other collection devices might be modified within the RSA, but they would be sized and placed appropriately to avoid substantially changing existing drainage patterns. In addition, construction of the MSF would not substantially alter the existing drainage pattern in the RSA, and there are no rivers or streams in the RSA. Based upon this analysis, construction of the MSF would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. Therefore, the MSF would have a less than significant impact during construction.

STORMWATER DRAINAGE

Less than Significant Impact. Site development of the proposed MSF would be in proximity to storm drains managed by the City of Los Angeles and Los Angeles County. However, the storm drains would ultimately connect back into existing systems, so the changes would not have an impact on the flow or capacity of the stormwater drainage infrastructure. Furthermore, project measure PM HWQ-1 would require the contractor to implement the construction BMPs outlined in the SWPPP, which would prevent pollution of stormwater runoff. In addition, construction of the MSF would not substantially alter the existing drainage pattern in the RSA, and there are no rivers or streams in the RSA. Based on this analysis, construction of the MSF would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Therefore, the MSF would have a less than significant impact during construction.

FLOOD FLOWS

No Impact. The MSF would be located outside the 100-year and 500-year floodplains. Construction in this area would not impede or redirect flow. Therefore, the MSF would have no impact during construction.

DRAINAGE PATTERN CONSTRUCTION IMPACT CONCLUSION

Less than Significant Impact. Based on the impacts described in the subsections above, construction of the MSF would not substantially alter the existing drainage pattern of the site or area, and, overall, it would have a less than significant impact during construction.

3.12.7.3.5.2 OPERATIONAL IMPACTS

The subsections below describe operational impacts on drainage patterns related to erosion and siltation, surface runoff, stormwater drainage, and flood flows.

EROSION AND SILTATION

No Impact. Erosion and siltation impacts during operation of the MSF that would stem from exposed or unstabilized earthen surfaces around structures, tracks, and associated infrastructure are not applicable in rock-lined or paved areas. In addition, operation of the MSF would not substantially alter the existing drainage pattern in the RSA, and there are no rivers or streams in the RSA. Therefore, the MSF would have no impact during operation.

SURFACE RUNOFF

Less than Significant Impact. Surface runoff during operation of the MSF would occur along impervious surfaces. Post-development BMPs set forth in project measure PM HWQ-2 to capture surface runoff would prevent substantial increase in the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. Therefore, the MSF would have a less than significant impact during operation.

STORMWATER DRAINAGE

Less than Significant Impact. Operation of the MSF would comply with post-construction measures in applicable NPDES permits, LID standards, and local policies protecting water quality, as set forth in project measure PM HWQ-2. Operation of the MSF would not exceed the capacity of existing or planned stormwater drainage systems, nor provide substantial additional sources of polluted runoff. Therefore, the MSF would have a less than significant impact during operation.

FLOOD FLOWS

No Impact. The MSF would be located outside the 100-year and 500-year floodplains. Operation in this area would not impede or redirect flow. Therefore, the MSF would have no impact during operation.

DRAINAGE PATTERN OPERATIONAL IMPACT CONCLUSION

Less than Significant Impact. Based on the impacts described in the subsections above, operation of the MSF would not substantially alter the existing drainage pattern of the site or area, and, overall, it would have a less than significant impact during operation.

3.12.7.4 IMPACT HWQ-4: INUNDATION

Impact HWQ-4: Would the project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

3.12.7.4.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.12.7.4.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The KNE San Vicente–Fairfax Alignment RSA is not within any identified tsunami or seiche zones (California Geologic Survey 2021). It does include portions within FEMA 100-year and 500-year flood zones. In areas outside of both flood zone categories, there is minimal flood risk during construction; therefore, there is little risk that construction in these areas would impede or redirect flow. Also, due to the underground profile of much of the alignment, construction through 100-year and 500-year flood zone areas would only be a concern where cut-and-cover construction would occur at stations. However, the Crenshaw/Adams, Midtown Crossing, Fairfax/3rd, La Cienega/Beverly, and San Vicente/Santa Monica Stations would be built during dry weather, as feasible, and they would have BMPs in place during wet-weather construction to minimize the potential for temporary flooding impacts during construction. As required by project measure PM HWQ-3, if a flood event occurs in a FEMA flood zone, construction activities shall cease, and equipment and materials shall be moved to a safe location outside the floodwaters to prevent the release of pollutants due to inundation. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.12.7.4.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. The KNE San Vicente–Fairfax Alignment RSA is not within any identified tsunami or seiche zones, and the track alignment would be underground. Stations located within a flood zone would be designed per the guidelines outlined in the 2021 Los Angeles County Floodplain Management Plan, as well as the Los Angeles County codes and ordinances, to avoid inundation. As a result, the potential for release of pollutants during inundation would be minimal. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.12.7.4.2 KNE FAIRFAX ALIGNMENT

3.12.7.4.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The KNE Fairfax Alignment RSA is not within any identified tsunami or seiche zones (California Geologic Survey 2021). It does include portions within FEMA 100-year and 500-year flood zones. In areas outside of both flood zone categories, there is minimal flood risk during construction; therefore, there is little risk that construction in these areas would impede or redirect flow. Also, due to the underground profile of much of the alignment, construction through 100-year and 500-year flood zone areas would only be a concern where cut-and-cover construction would occur at stations. For the KNE Fairfax Alignment, the Crenshaw/Adams, Midtown Crossing, and Fairfax/3rd Station RSAs would be located in 100-year or 500-year flood zones. As required by project measure PM HWQ-3, if a flood event occurs in a FEMA flood zone, construction activities shall cease, and equipment and materials shall be moved to a safe location outside the floodwaters to prevent the release of pollutants due to inundation. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.12.7.4.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. The KNE Fairfax Alignment RSA is not within any identified tsunami or seiche zones, and the track alignment would be underground. Stations located within a flood zone would be designed per the guidelines outlined in the 2021 Los Angeles County Floodplain Management Plan, as well as the Los Angeles County codes and ordinances, to avoid inundation. As a result, the potential for release of pollutants during inundation would be minimal. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.12.7.4.3 KNE LA BREA ALIGNMENT

3.12.7.4.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The KNE La Brea Alignment RSA is not within any identified tsunami or seiche zones (California Geologic Survey 2021). It does include portions within FEMA 100-year and 500-year flood zones. In areas outside of both flood zone categories, there is minimal flood risk during construction; therefore, there is little risk that construction in these areas would impede or redirect flow. Also, due to the underground profile of much of the alignment, construction through 100-year and 500-year flood zone areas would only be a concern where cut-and-cover construction would occur at stations.

For the KNE La Brea Alignment, only the Crenshaw/Adams and Midtown Crossing Station RSAs would be located in 100-year or 500-year flood zones. As required by project measure PM HWQ-3, if a flood event occurs in a FEMA flood zone, construction activities shall cease, and equipment and materials shall be moved to a safe location outside the floodwaters to prevent the release of pollutants due to inundation. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.12.7.4.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. The KNE La Brea Alignment RSA is not within any identified tsunami or seiche zones, and the track alignment would be underground. Stations located within a flood zone would be designed per the guidelines outlined in the 2021 Los Angeles County Floodplain Management Plan, as well as the Los Angeles County codes and ordinances, to avoid inundation. As a result, the potential for release of pollutants during inundation would be minimal. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.12.7.4.4 HOLLYWOOD BOWL DESIGN OPTION

3.12.7.4.4.1 CONSTRUCTION IMPACTS

No Impact. The Hollywood Bowl Design Option RSA is not within any identified tsunami, seiche zones, or flood zones. Therefore, the Hollywood Bowl Design Option would have no impact during construction.

3.12.7.4.4.2 OPERATIONAL IMPACTS

No Impact. The Hollywood Bowl Design Option RSA is not within identified tsunami, seiche, or flood zones. Therefore, the design option would have no impact related to inundation during operation.

3.12.7.4.5 MAINTENANCE AND STORAGE FACILITY

3.12.7.4.5.1 CONSTRUCTION IMPACTS

No Impact. The MSF RSA is not within identified tsunami, seiche, or flood zones. Therefore, the MSF would have no impact during construction.

3.12.7.4.5.2 OPERATIONAL IMPACTS

No Impact. The MSF RSA is not within identified tsunami, seiche, or flood zones. Therefore, the MSF would have no impact during operation.

3.12.7.5 IMPACT HWQ-5: WATER MANAGEMENT

Impact HWQ-5: Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

3.12.7.5.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.12.7.5.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The Los Angeles Basin Plan identifies existing beneficial uses for inland surface waters and groundwater basins in the KNE San Vicente–Fairfax Alignment RSA. Therefore, if construction of the alignment were to degrade beneficial uses of Ballona Creek or the Central and Hollywood groundwater subbasins, or result in an exceedance of an established TMDL, it would conflict with the Los Angeles Basin Plan. In addition, Ballona Creek Reach 1 is an inland surface water; during construction, polluted stormwater entering the storm drains that exit at the downstream inland surface water could affect current and potential beneficial uses of Ballona Creek Reach 1. Furthermore, erosion and sediment-laden runoff from soil-disturbing construction activities, such as construction vehicle tracking over bare soils, excavation, and grading operations, can affect water quality downstream of disturbed areas. Construction vehicles can contribute pollutants of concerns, including oil, grease, and heavy metals, if they are not properly maintained and stored. However, project measure PM HWQ-1 would require a construction SWPPP to be prepared, which would reduce impacts related to stormwater runoff, complying with SWRCB's Construction General NPDES Permit.

During construction of the alignment, activities such as groundwater dewatering and excavation below the groundwater table, which is as high as 10 feet bgs in the RSA, as well as accidental hazardous material spills, could affect current and potential beneficial uses of groundwater within the Central and Hollywood Subbasins. However, project measure PM HWQ-1 requires dewatering and groundwater disposal in compliance with applicable dewatering permits to protect the beneficial uses of groundwater basins. Therefore, construction of the alignment would not conflict with or obstruct implementation of the Los Angeles Basin Plan.

The groundwater subbasins underlying the RSA do not have a sustainable groundwater management plan and, thus, no conflict with a sustainable groundwater management plan would occur.

As described above, with implementation of project measure PM HWQ-1, construction would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.12.7.5.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE San Vicente–Fairfax Alignment would conflict with the Los Angeles Basin Plan if it were to degrade beneficial uses of Ballona Creek or the Central and Hollywood Subbasins or result in an exceedance of an established TMDL. However, project measure PM HWQ-2 would require compliance with post-construction measures in NPDES permits, LID standards, and local policies protecting water quality. Compliance with these permits, plans, and policies would minimize runoff volume, prevent contribution to degradation of water quality within Ballona Creek and each groundwater subbasin, and would meet TMDL requirements. Therefore, operation of the alignment would not contribute to degradation of beneficial uses or exceed TMDL requirements in affected surface watershed and groundwater subbasins, and it would not conflict with or obstruct implementation of the Los Angeles Basin Plan.

The groundwater subbasins underlying the RSA do not have a sustainable groundwater management plan and, thus, no conflict with a sustainable groundwater management plan would occur.

As described above, with implementation of project measure PM HWQ-2, operation would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.12.7.5.2 KNE FAIRFAX ALIGNMENT

3.12.7.5.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The Los Angeles Basin Plan identifies existing beneficial uses for inland surface waters and groundwater basins in the KNE Fairfax Alignment RSA. Therefore, if construction of the alignment were to degrade beneficial uses of Ballona Creek or the Central and Hollywood groundwater subbasins, or result in an exceedance of an established TMDL, it would conflict with the Los Angeles Basin Plan. In addition, Ballona Creek Reach 1 is an inland surface water; during construction, polluted stormwater entering the storm drains that exit at the downstream inland surface water could affect current and potential beneficial uses of Ballona Creek Reach 1. Furthermore, erosion and sediment-laden runoff from soil-disturbing construction activities, such as construction vehicle tracking over bare soils, excavation, and grading operations, can affect water quality downstream of disturbed areas. Construction vehicles can contribute pollutants of concerns, including oil, grease, and heavy metals, if they are not properly maintained and stored. However, project measure PM HWQ-1 would require a construction SWPPP to be prepared, which would reduce impacts related to stormwater runoff, complying with SWRCB's Construction General NPDES Permit.

During construction of the alignment, activities such as groundwater dewatering and excavation below the groundwater table, which is as high as 10 feet bgs in the RSA, as well as accidental hazardous material spills, could affect current and potential beneficial uses of groundwater within the Central and Hollywood Subbasins. However, project measure PM HWQ-1 requires dewatering and groundwater disposal in compliance with applicable dewatering permits to protect the beneficial uses of groundwater basins.

Therefore, construction of the alignment would not conflict with or obstruct implementation of the Los Angeles Basin Plan.

The groundwater subbasins underlying the RSA do not have a sustainable groundwater management plan and, thus, no conflict with a sustainable groundwater management plan would occur.

As described above, with implementation of project measure PM HWQ-1, construction would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.12.7.5.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE Fairfax Alignment would conflict with the Los Angeles Basin Plan if it were to degrade beneficial uses of Ballona Creek or the Central and Hollywood Subbasins or result in an exceedance of an established TMDL. However, project measure PM HWQ-2 would require compliance with post-construction measures in NPDES permits, LID standards, and local policies protecting water quality. Compliance with these permits, plans, and policies would minimize runoff volume, prevent contribution to degradation of water quality within Ballona Creek and each groundwater subbasin, and would meet TMDL requirements. Therefore, operation of the alignment would not contribute to degradation of beneficial uses or exceed TMDL requirements in affected surface watershed and groundwater subbasins, and it would not conflict with or obstruct implementation of the Los Angeles Basin Plan.

The groundwater subbasins underlying the RSA do not have a sustainable groundwater management plan and, thus, no conflict with a sustainable groundwater management plan would occur.

As described above, with implementation of project measure PM HWQ-2, operation would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.12.7.5.3 KNE LA BREA ALIGNMENT

3.12.7.5.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The Los Angeles Basin Plan identifies existing beneficial uses for inland surface waters and groundwater basins in the KNE La Brea Alignment RSA. Therefore, if construction of the alignment were to degrade beneficial uses of Ballona Creek or the Central and Hollywood groundwater subbasins, or result in an exceedance of an established TMDL, it would conflict with the Los Angeles Basin Plan. In addition, Ballona Creek Reach 1 is an inland surface water; during construction, polluted stormwater entering the storm drains that exit at the downstream inland surface water could affect current and potential beneficial uses of Ballona Creek Reach 1. Furthermore, erosion and sediment-laden runoff from soil-disturbing construction activities, such as construction vehicle tracking over bare soils, excavation, and grading operations, can affect water quality downstream of disturbed areas. Construction vehicles can contribute pollutants of concerns, including oil, grease, and heavy metals, if they are not properly maintained and stored. However, project measure PM HWQ-1 would require a

construction SWPPP to be prepared, which would reduce impacts related to stormwater runoff, complying with SWRCB's Construction General NPDES Permit.

During construction of the alignment, activities such as groundwater dewatering and excavation below the groundwater table, which is as high as 10 feet bgs in the RSA, as well as accidental hazardous material spills, could affect current and potential beneficial uses of groundwater within the Central and Hollywood Subbasins. However, project measure PM HWQ-1 requires dewatering and groundwater disposal in compliance with applicable dewatering permits to protect the beneficial uses of groundwater basins. Therefore, construction of the alignment would not conflict with or obstruct implementation of the Los Angeles Basin Plan.

The groundwater subbasins underlying the RSA do not have a sustainable groundwater management plan and, thus, no conflict with a sustainable groundwater management plan would occur.

As described above, with implementation of project measure PM HWQ-1, construction would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.12.7.5.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE La Brea Alignment would conflict with the Los Angeles Basin Plan if it were to degrade beneficial uses of Ballona Creek or the Central and Hollywood Subbasins or result in an exceedance of an established TMDL. However, project measure PM HWQ-2 would require compliance with post-construction measures in NPDES permits, LID standards, and local policies protecting water quality. Compliance with these permits, plans, and policies would minimize runoff volume, prevent contribution to degradation of water quality within Ballona Creek and each groundwater subbasin, and would meet TMDL requirements. Therefore, operation of the alignment would not contribute to degradation of beneficial uses or exceed TMDL requirements in affected surface watershed and groundwater subbasins, and it would not conflict with or obstruct implementation of the Los Angeles Basin Plan.

The groundwater subbasins underlying the RSA do not have a sustainable groundwater management plan and, thus, no conflict with a sustainable groundwater management plan would occur.

As described above, with implementation of project measure PM HWQ-2, operation would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.12.7.5.4 HOLLYWOOD BOWL DESIGN OPTION

3.12.7.5.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The Los Angeles Basin Plan identifies existing beneficial uses for inland surface waters and groundwater basins in the Hollywood Bowl Design Option RSA. Therefore, as with the alignments, if construction of the design option were to degrade beneficial uses of Ballona Creek or the Hollywood groundwater subbasin, or result in an exceedance of an established TMDL, it would conflict with

the Los Angeles Basin Plan. In addition, Ballona Creek Reach 1 is an inland surface water (see Section 3.12.5.1.3); during construction of the design option, polluted stormwater entering the storm drains that exits at the downstream inland surface water could affect current and potential beneficial uses of Ballona Creek Reach 1. Furthermore, erosion and sediment-laden runoff from soil-disturbing construction activities, such as construction vehicle tracking over bare soils, excavation, and grading operations, can affect water quality downstream of disturbed areas. Construction vehicles can contribute pollutants of concern, including oil, grease, and heavy metals, if they are not properly maintained and stored. However, PM HWQ-1 would require a construction SWPPP to be prepared, which would reduce any potential impacts related to stormwater runoff, complying with SWRCB's Construction General NPDES Permit.

The groundwater table can be as high as 90 feet bgs in the design option RSA, and the maximum depth to the bottom of the proposed tunnel is roughly 110 feet bgs. Therefore, groundwater is likely to be encountered during construction. As described above, project measure PM HWQ-1 would require dewatering and groundwater disposal in compliance with applicable dewatering permits to protect the beneficial uses of groundwater basins. Construction of the design option would not conflict with or obstruct implementation of the Los Angeles Basin Plan.

The groundwater subbasins underlying the design option do not have a sustainable groundwater management plan and, thus, no conflict with a sustainable groundwater management plan would occur.

As shown in the analysis presented above, with implementation of PM HWQ-1, construction of the Hollywood Bowl Design Option would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.12.7.5.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the Hollywood Bowl Design Option would conflict with the Los Angeles Basin Plan if it were to degrade beneficial uses of Ballona Creek or the Hollywood Subbasin or result in an exceedance of an established TMDL. However, PM HWQ-2 would require compliance with post-construction measures in NPDES permits, LID standards, and local policies protecting water quality. Compliance with these permits, plans, and policies would minimize runoff volume, prevent contribution to degradation of water quality within Ballona Creek and each groundwater subbasin, and would meet TMDL requirements. Therefore, operation of the design option would not contribute to degradation of beneficial uses or exceed TMDL requirements in affected surface watershed and groundwater subbasins. Based on the above, operation of the design option would not conflict with or obstruct implementation of the Los Angeles Basin Plan.

The groundwater subbasins underlying the design option do not have a sustainable groundwater management plan and, thus, no conflict with a sustainable groundwater management plan would occur.

As shown in the analysis presented above, with implementation of PM HWQ-2, operation of the design option would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.12.7.5.5 MAINTENANCE AND STORAGE FACILITIES

3.12.7.5.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the MSF would conflict with the Los Angeles Basin Plan if it were to degrade beneficial uses of Ballona Creek, Dominguez Channel, or the West Coast Subbasin, or result in an exceedance of an established TMDL. Polluted stormwater entering the storm drains that exit to Ballona Creek or the Dominguez Channel could affect current and potential beneficial uses of the channels. Furthermore, erosion and sediment-laden runoff from soil-disturbing construction activities, such as construction vehicle tracking over bare soils, excavation, and grading operations, can affect water quality downstream of disturbed areas. Construction vehicles can contribute pollutants of concerns, including oil, grease, and heavy metals, if they are not properly maintained and stored. However, project measure PM HWQ-1 would require a construction SWPPP to be prepared, which would comply with SWRCB's Construction General NPDES Permit.

Construction activities such as grading are not likely to affect the groundwater table, which is as high as 40 feet bgs in the MSF RSA. However, accidental hazardous material spills could affect current and potential beneficial uses of groundwater within the West Coast Subbasin. Project measure PM HWQ-1 requires dewatering and groundwater disposal in compliance with applicable dewatering permits to protect the beneficial uses of groundwater basins. Therefore, construction of the MSF would not conflict with or obstruct implementation of the Los Angeles Basin Plan.

The groundwater subbasin underlying the RSA does not have a sustainable groundwater management plan; thus, no conflict with a sustainable groundwater management plan would occur.

As described above, with implementation of project measure PM HWQ-1, construction of the MSF would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Therefore, the MSF would have a less than significant impact during construction.

3.12.7.5.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the MSF has the potential to affect surface water and groundwater resources and water quality. However, operation, including cleaning of vehicles and other activities that have the potential to affect water quality, would conform with MRDC 11.5 (Metro 2014), which specifies the inclusion of water filtration systems, storage tanks, and wastewater treatment equipment at Metro locations for the carwash and exterior cleaning equipment to ensure treatment prior to discharge. Operation of the MSF would comply with applicable permits, such as SWRCB's IGP and post-construction measures in NPDES permits. In addition, implementation of project measure PM HWQ-2 would require implementation of post-construction BMPs. Thus, operation of the MSF would not substantially degrade surface or groundwater quality and would therefore not conflict with or obstruct implementation of the Los Angeles Basin Plan.

The groundwater basin underlying the RSA does not have a sustainable groundwater management plan; thus, no conflict with a sustainable groundwater management plan would occur.

As described above, with implementation of project measure PM HWQ-2, operation of the MSF would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Therefore, the MSF would have a less than significant impact during operation.

3.12.7.6 MITIGATION MEASURES

As the impact analysis above demonstrates, construction and operation of any of the KNE alignments and stations, the design option, and the MSF would result in no impact or a less than significant impact related to hydrologic resources and water quality. Therefore, no mitigation is required under CEQA.

3.12.7.7 SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

Table 3.12-2 summarizes the hydrologic resource and water quality impact significance conclusions and applicable mitigation measures. As indicated above, there are no significant hydrologic resource or water quality impacts that would require mitigation.

TABLE 3.12-2. KNE SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

IMPACT		IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES				
		KNE SAN VICENTE–FAIRFAX ALIGNMENT	KNE FAIRFAX ALIGNMENT	KNE LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MAINTENANCE AND STORAGE FACILITY
Impact HWQ-1: Water Quality	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: No Impact	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: No Impact	Construction: LTS Operation: LTS
Impact HWQ-2: Groundwater Supplies and Recharge	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
Impact HWQ-3: Drainage Patterns	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: No Impact
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
Impact HWQ-4: Inundation	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact

IMPACT		IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES				
		KNE SAN VICENTE–FAIRFAX ALIGNMENT	KNE FAIRFAX ALIGNMENT	KNE LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MAINTENANCE AND STORAGE FACILITY
Impact HWQ-5: Water Management	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS

Source: Connect Los Angeles Partners 2024
LTS = less than significant impact

3.13 LAND USE AND PLANNING

3.13.1 INTRODUCTION

This discussion provides an evaluation of K Line Northern Extension (KNE) as it relates to land use and planning. It includes descriptions of the federal, state, and local regulatory setting, existing conditions, and the impacts from construction and operation of the proposed alignments and stations, design option, and the maintenance and storage facility (MSF), as well as mitigation measures where applicable. For more detailed information, refer to the KNE Land Use and Planning Technical Report (Appendix 3.13-A).

3.13.2 REGULATORY FRAMEWORK

3.13.2.1 FEDERAL

There are no federal regulations applicable to the project regarding land use and planning.

3.13.2.2 STATE

The following state laws and regulations are relevant to construction and operation of the project:

- Sustainable Communities and Climate Protection Act of 2008 (Senate Bill 375, Chapter 728)
- Authority for and Scope of General Plans (California Government Code Sections 65300 - 65303.4)
- California Environmental Quality Act (CEQA) (Sections 21000 et seq. and Sections 15000 et seq.)

3.13.2.3 REGIONAL

- Southern California Association of Governments (SCAG)'s Connect SoCal - The 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (SCAG 2020)

3.13.2.4 LOCAL

The following Metro plans and policies are applicable to land use and planning and to project design:

- Vision 2028 Plan
- Long Range Transportation Plan
- Countywide Sustainability Planning Policy and Implementation Plan
- Active Transportation Strategic Plan
- Complete Streets Policy
- First/Last Mile Strategic Plan
- Transit Oriented Communities Policy

Los Angeles County and the Cities of Los Angeles and West Hollywood have codes, ordinances, general plans, and community plans that regulate zoning and land use and resource allocation. These policies generally guide development by providing standards, compliances, exemptions, and limitations for development in their respective jurisdictions. Other considerations include multimodal prioritization, pedestrian safety, economic revitalization, and parking requirements.

3.13.3 METHODOLOGY

3.13.3.1 CEQA METHODOLOGY

The purpose of this analysis is to evaluate the project against CEQA thresholds of significance as the basis for determining the level of impacts related to land use and planning.

3.13.3.2 SIGNIFICANCE THRESHOLDS

In accordance with Appendix G of the 2022 CEQA Guidelines, the project would have a significant impact related to land use and planning if it would:

- Impact LUP-1: Physically divide an established community.
- Impact LUP-2: Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

3.13.4 RESOURCE STUDY AREA

The resource study area (RSA) for the land use and planning analysis is defined as the existing and planned land uses within 100 feet of the alignments and a 0.5-mile radius from the proposed stations, design option, and MSF.

3.13.5 EXISTING SETTING

This existing setting discussion summarizes current conditions related to land use and planning within and near the KNE RSA.

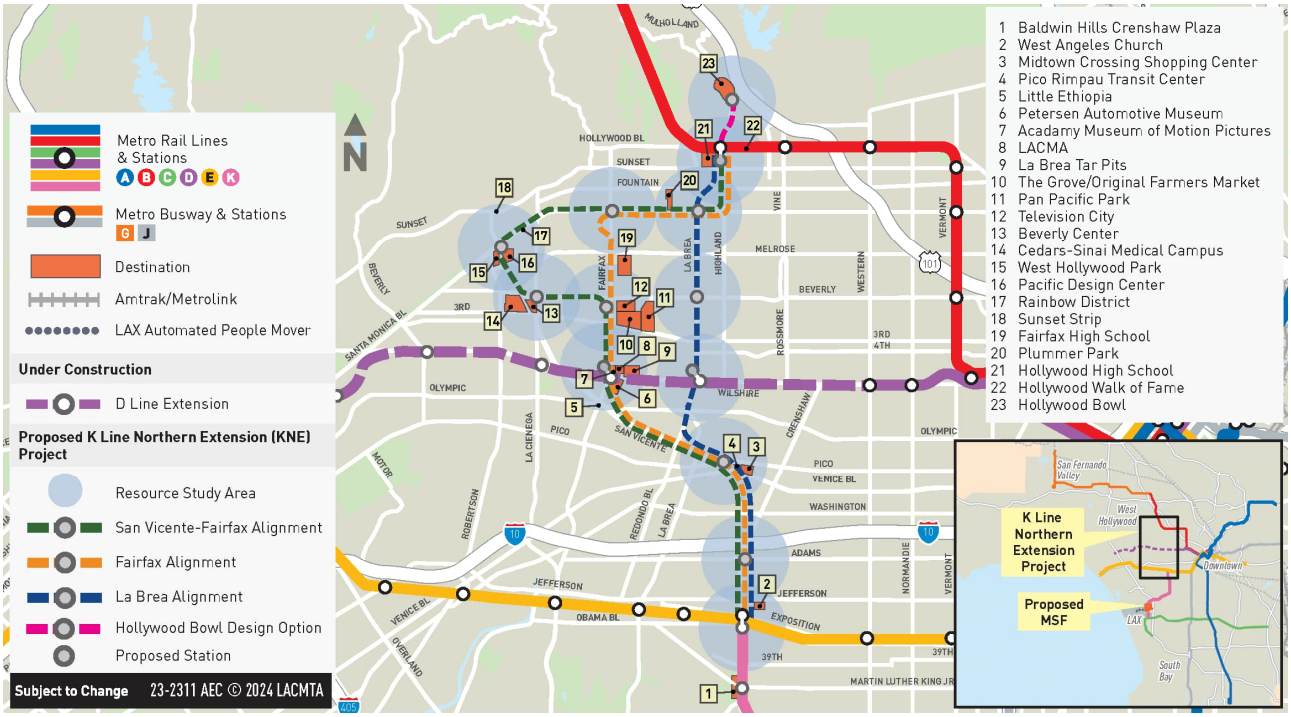
3.13.5.1 REGIONAL SETTING

The project would provide a transit connection between Metro's B, D, E, and K Lines in the central and western parts of Los Angeles County linking to the regional transit network. Land uses within the RSA include single-family and multifamily residential neighborhoods, dense commercial and retail corridors, open space, education and hospital facilities, and industrial areas. Land uses adjacent to the alignments encompass a range of land use types typically found in mature urban and suburban communities.

The RSA south of Wilshire Boulevard consists of low-rise but fairly dense housing with small-scale commercial uses, while the RSA north of Wilshire Boulevard is characterized by regional activity centers, dense retail development, hotels, and significant employment centers and tourist attractions, as well as high-density, multifamily residential development. Some of the major regional activity centers within the RSA include the Midtown Crossing Shopping Center, Los Angeles County Museum of Art (LACMA), the

Original Farmers Market, the Grove, Cedars-Sinai Medical Center, the Beverly Center, the West Hollywood Rainbow District, the Hollywood Walk of Fame, and the Hollywood Bowl. The RSA for the alignments and stations, the Hollywood Bowl Design Option, and the MSF, as well as major destinations, are shown in Figure 3.13-1.

FIGURE 3.13-1. RESOURCE STUDY AREA AND MAJOR DESTINATIONS



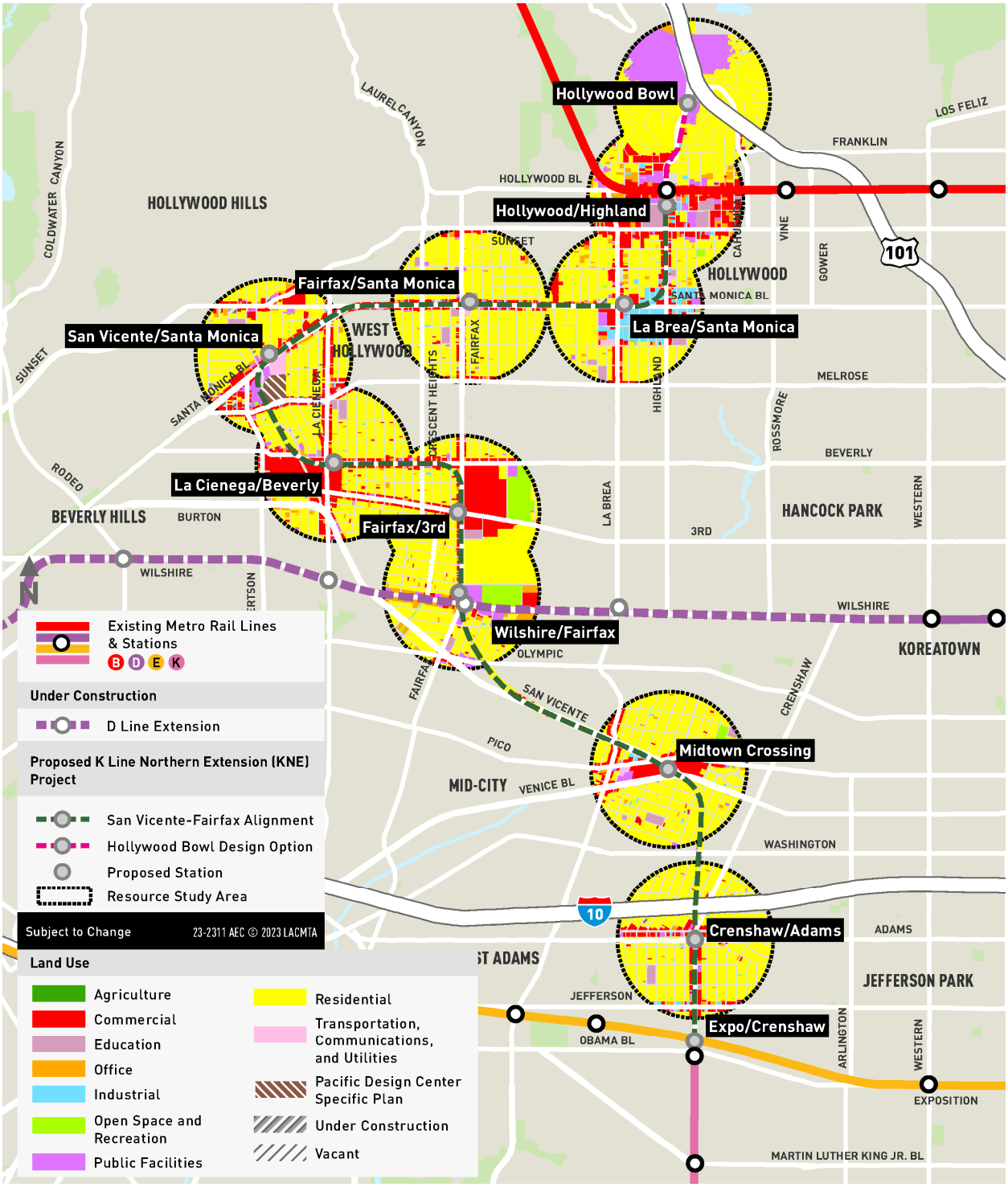
Source: Connect Los Angeles Partners 2024

3.13.5.1.1 ALIGNMENTS AND STATIONS

3.13.5.1.1.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

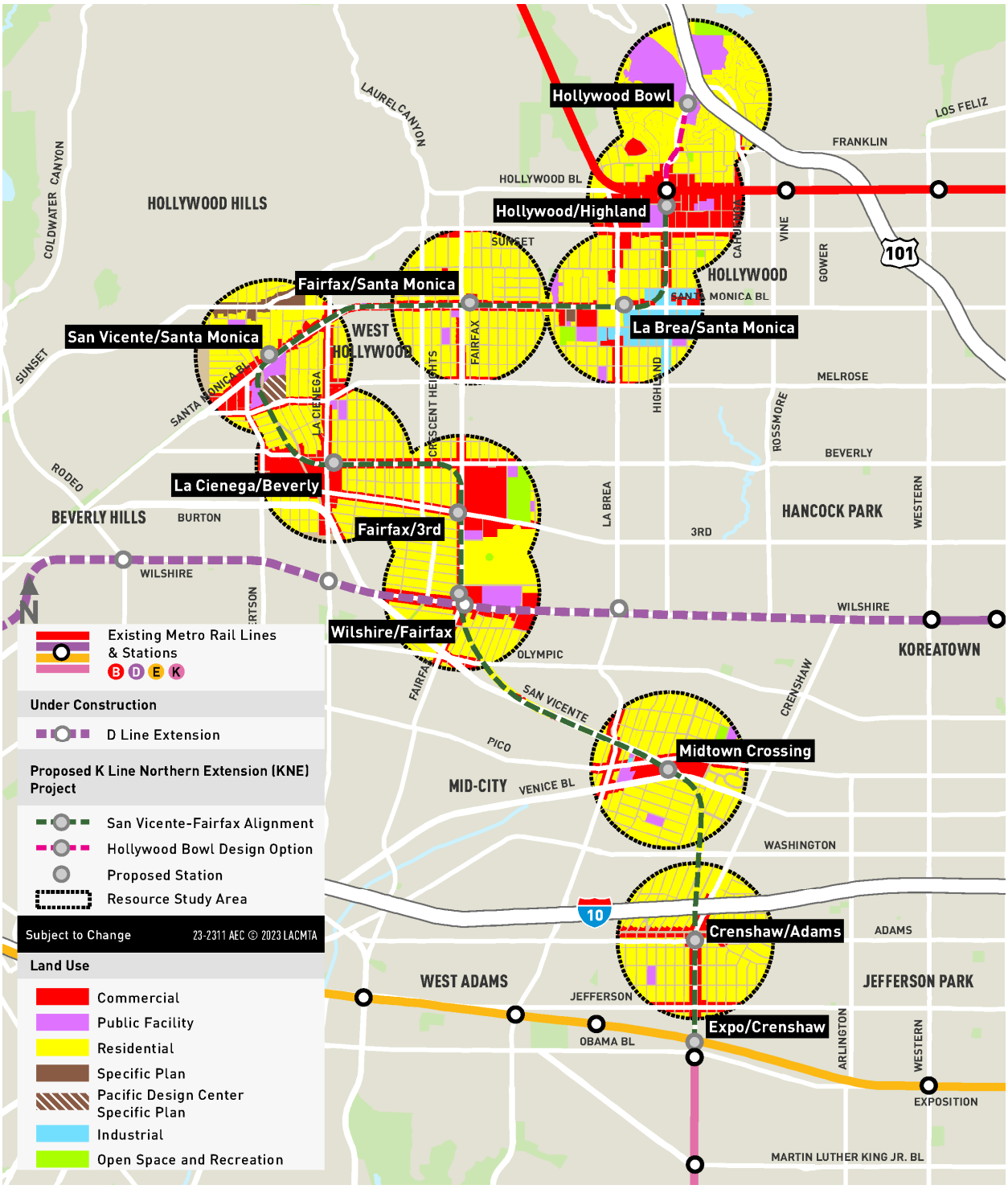
Existing land uses within the RSA for the KNE San Vicente–Fairfax Alignment, shown in Figure 3.13-2, include commercial, residential, office, open space and recreation, public facilities, transportation/ communications/utilities, industrial, vacant, and under construction land uses. Future land uses within the RSA for the KNE San Vicente–Fairfax Alignment, shown in Figure 3.13-3, include commercial, public facility, residential, specific plan, open space, and industrial land uses. Existing land uses within the RSA for the proposed stations are described in the following sections.

FIGURE 3.13-2. EXISTING LAND USES WITHIN KNE SAN VICENTE–FAIRFAX ALIGNMENT RESOURCE STUDY AREAS



Source: SCAG 2020, ZIMAS 2024

FIGURE 3.13-3. PLANNED LAND USES WITHIN KNE SAN VICENTE–FAIRFAX ALIGNMENT RESOURCE STUDY AREAS

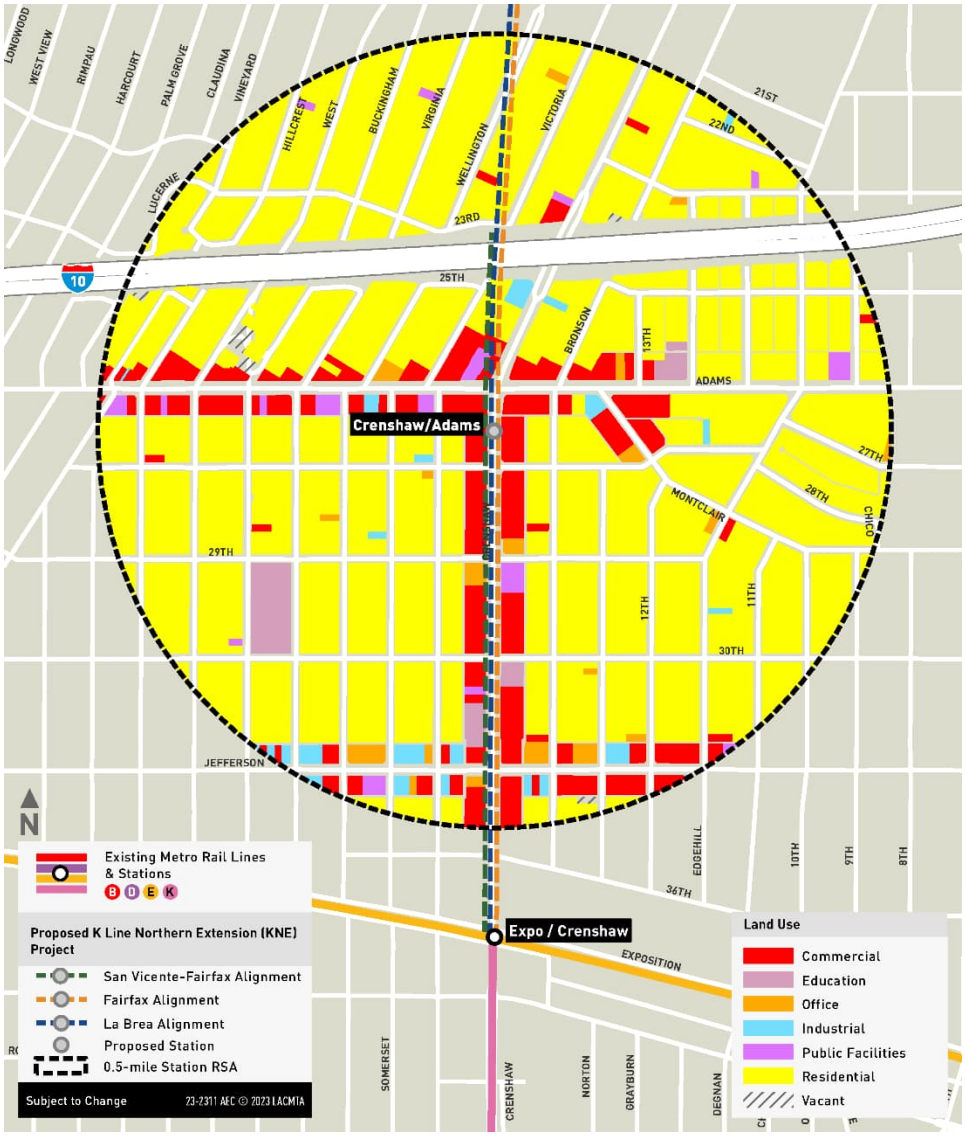


Source: SCAG 2020, ZIMAS 2024

CRENSHAW/ADAMS STATION

Land uses along Adams and Crenshaw Boulevards are primarily designated as commercial and residential, with some public facilities uses throughout the RSA. Commercial land uses are mostly concentrated along the intersection of Adams and Crenshaw Boulevards adjacent to the proposed station, as shown in Figure 3.13-4. Activity centers within the station RSA include Virginia Road Elementary School, Little Stars Pre-School, and religious institutions.

FIGURE 3.13-4. EXISTING LAND USES WITHIN CRENSHAW/ADAMS STATION RESOURCE STUDY AREA

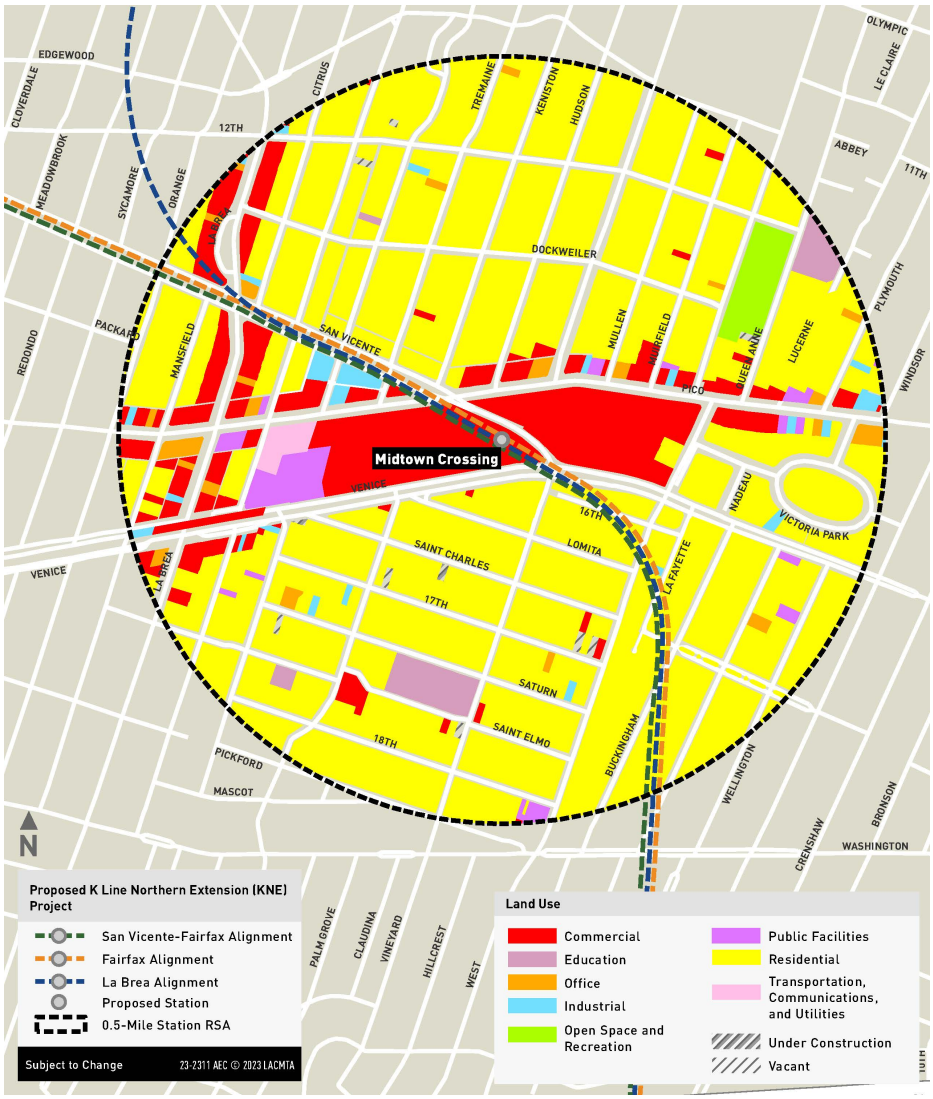


Source: SCAG 2020, ZIMAS 2024

MIDTOWN CROSSING STATION

Land uses along Pico Boulevard, Venice Boulevard, and La Brea Avenue are primarily designated as commercial and residential land uses, as shown in Figure 3.13-5. Additionally, public facilities and open space uses are located throughout the station RSA.

FIGURE 3.13-5. EXISTING LAND USES WITHIN MIDTOWN CROSSING STATION RESOURCE STUDY AREA



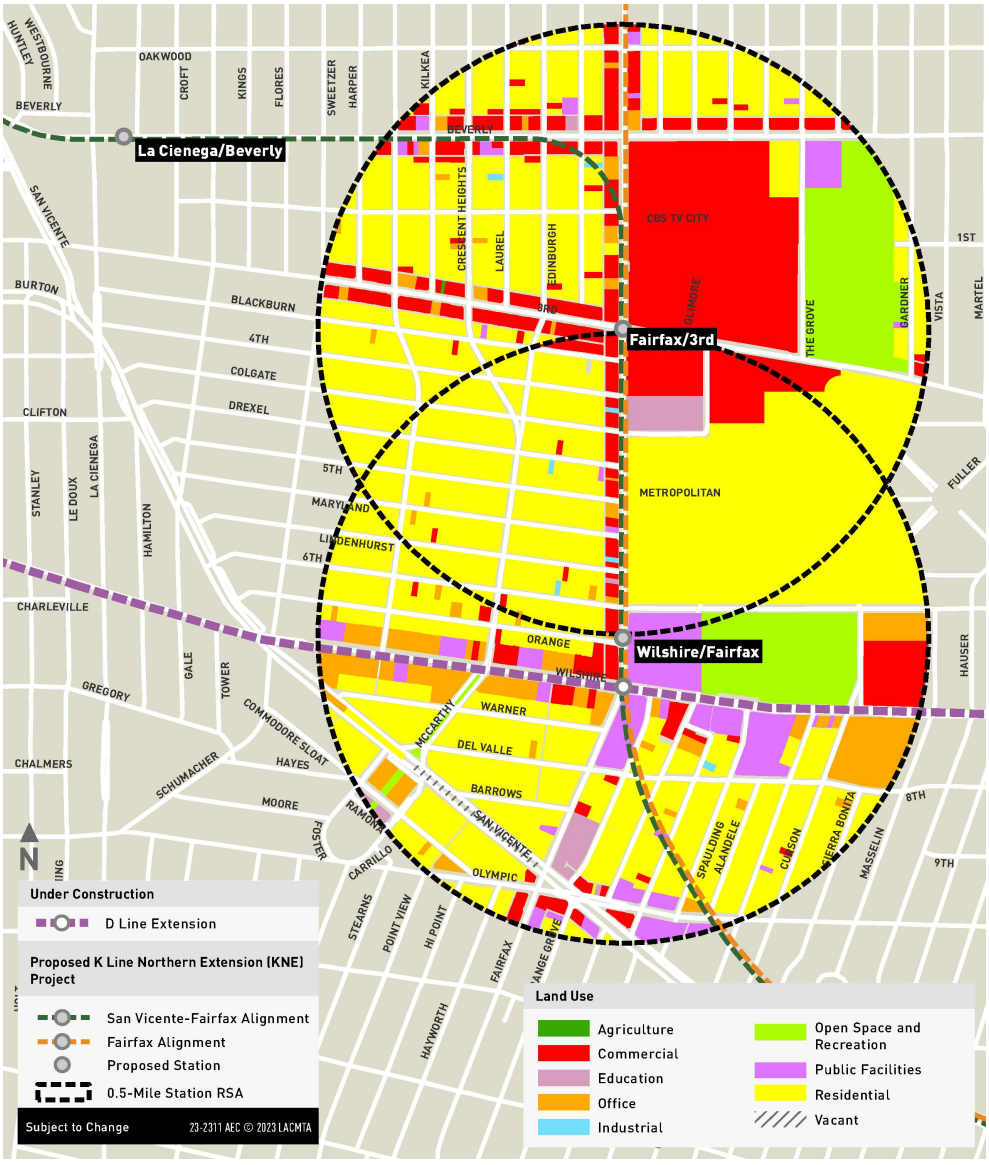
Source: SCAG 2020, ZIMAS 2024

Activity centers within the Midtown Crossing Station RSA include Queen Anne Park and Recreation Center, Alta Loma Elementary School, and Manna Methodist Church of Los Angeles. The Pico-Rimpau Transit Center located on the east side of San Vicente Boulevard serves over 10 Metro and municipal lines. The proposed Midtown Crossing Station is also located within and adjacent to the Midtown Shopping Center and Midtown Crossing Shopping Center; both commercial shopping centers are designated as Community Commercial sites (City of Los Angeles 2016d).

WILSHIRE/FAIRFAX STATION

The Wilshire/Fairfax Station RSA includes major commercial throughfares along Wilshire Boulevard and Fairfax Avenue. Land uses along Wilshire Boulevard and Fairfax Avenue are designated as commercial, residential, public facilities, open space, and office, as shown in Figure 3.13-6. Cultural attractions make up "Museum Row" on Wilshire Boulevard, which is a popular destination and major activity center that includes LACMA, the Academy Museum of Motion Pictures, the Petersen Automotive Museum, and the La Brea Tar Pits. Parcels along Wilshire Boulevard are designated as Regional Center Commercial, a commercial land use designation that allows for both commercial and residential uses (City of Los Angeles 2016d). Fairfax Avenue is primarily designated for commercial and residential uses.

FIGURE 3.13-6. EXISTING LAND USES WITHIN WILSHIRE/FAIRFAX STATION AND FAIRFAX/3RD STATION RESOURCE STUDY AREAS



Source: SCAG 2020, ZIMAS 2024

The Wilshire/Fairfax Station RSA is primarily comprised of residential land uses. Park La Brea is a residential complex with townhomes and high-rise apartments located on the east side of Fairfax Avenue north of 6th Street. The City of Los Angeles designates the La Brea Tar Pits, LACMA, and the Petersen Automotive Museum as public facilities, and the Academy Museum of Motion Pictures is designated as a commercial use.

The future Wilshire/Fairfax Station for the Metro D Line is currently under construction and scheduled to open in 2025 (Metro 2022). Once complete, the Wilshire/Fairfax Station entrance for the Metro D Line would be on the southeast corner of Wilshire Boulevard and Orange Grove Avenue.

FAIRFAX/3RD STATION

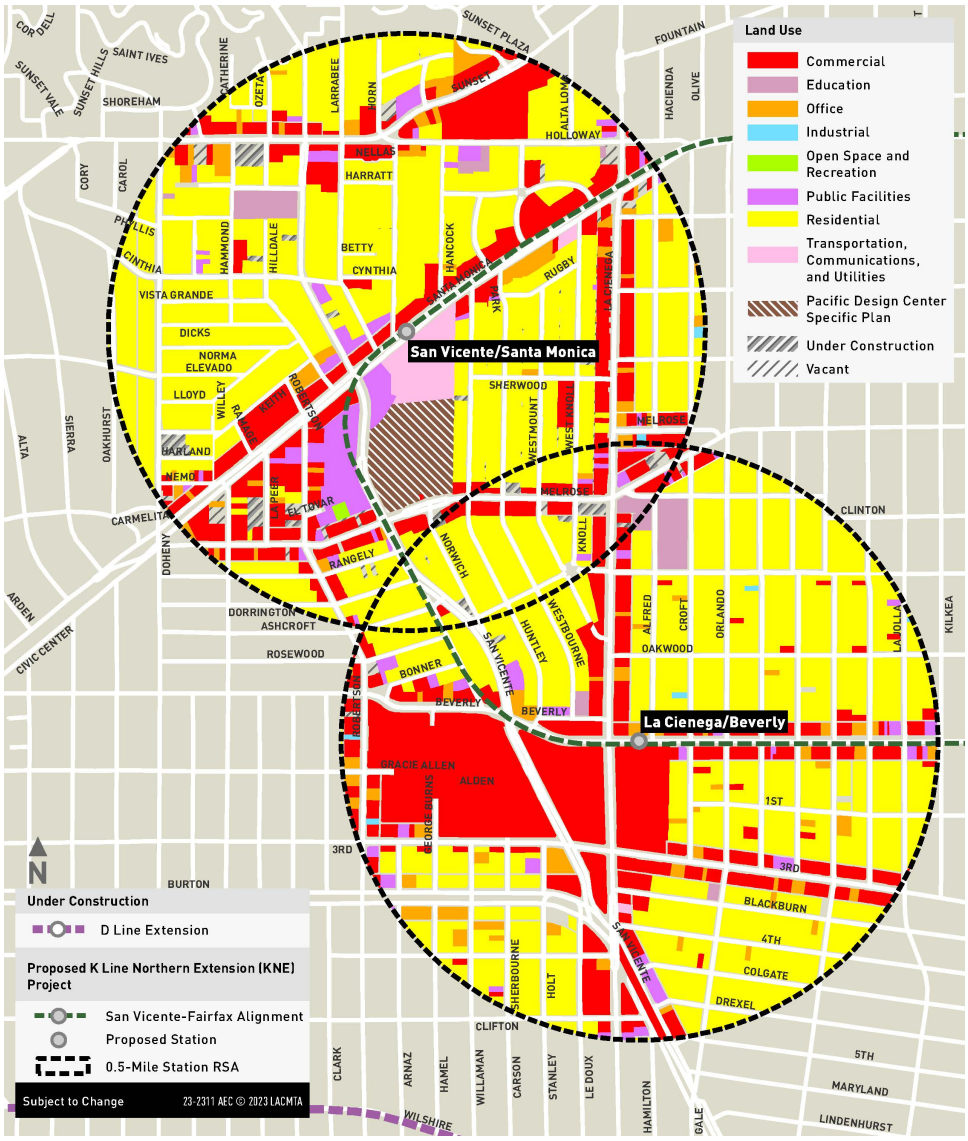
Land uses along Fairfax Avenue and 3rd Street are designated as commercial, residential, public facilities (including education), open space, and recreation, as shown in Figure 3.13-6. Large community commercial areas are distributed on the east side of Fairfax Avenue between Beverly Boulevard and 4th Street and along 3rd Street between Fairfax Avenue and Gardner Street (City of Los Angeles 2016d). The Original Farmers Market and the Grove Shopping Center are major destinations that draw approximately 20 million annual visitors and are within the Fairfax/3rd Station RSA. According to the TVC2050 Project Initial Study (Television City Studios 2022), Television City located approximately 0.25 mile north of the proposed station, is projected to employ up to 7,000 people by 2043 and would serve as a major activity center. Pan Pacific Park and the Holocaust Museum LA are located on 3rd Street approximately 0.3 mile east of the proposed station and are open spaces with recreation facilities. Other major destinations and activity centers include LACMA, which is 0.5 mile south of the Fairfax/3rd Station.

LA CIENEGA/BEVERLY STATION

Land uses along La Cienega and Beverly Boulevards are primarily commercial with some office and public facility uses, as shown in Figure 3.13-7. Cedars-Sinai Medical Center and regional shopping centers, the Beverly Center, and Beverly Connection are located within the La Cienega/Beverly Station RSA. The retail destinations along Beverly Boulevard and 3rd Street create a regional retail center. Land use within the La Cienega/Beverly Station RSA is characterized by Regional Commercial and Community Commercial uses, particularly south of Beverly Boulevard (City of Los Angeles 2016d). The La Cienega Boulevard and Beverly Boulevard corridors are characterized by Neighborhood Office Commercial land uses. Cedar-Sinai Medical Center, approximately 725 feet west of the proposed La Cienega/Beverly Station, serves as a regional medical center that attracts nearly 944,000 outpatient visits and 91,000 emergency visits annually, and has 14,000 full-time staff and 3,500 active volunteers (Cedars-Sinai 2022).

Although the proposed La Cienega/Beverly Station is located within the City of Los Angeles, the station RSA falls within both the City of Los Angeles and the City of West Hollywood. Residential land uses exist within the station RSA for both the City of Los Angeles and the City of West Hollywood (City of West Hollywood 2011b). Figure 3.13-7 illustrates land use patterns within the RSA of both the La Cienega/Beverly Station and the San Vicente/Santa Monica Station.

FIGURE 3.13-7. EXISTING LAND USES WITHIN LA CIENEGA/BEVERLY STATION AND SAN VICENTE/SANTA MONICA STATION RESOURCE STUDY AREAS



Source: SCAG 2020, ZIMAS 2024

SAN VICENTE/SANTA MONICA STATION

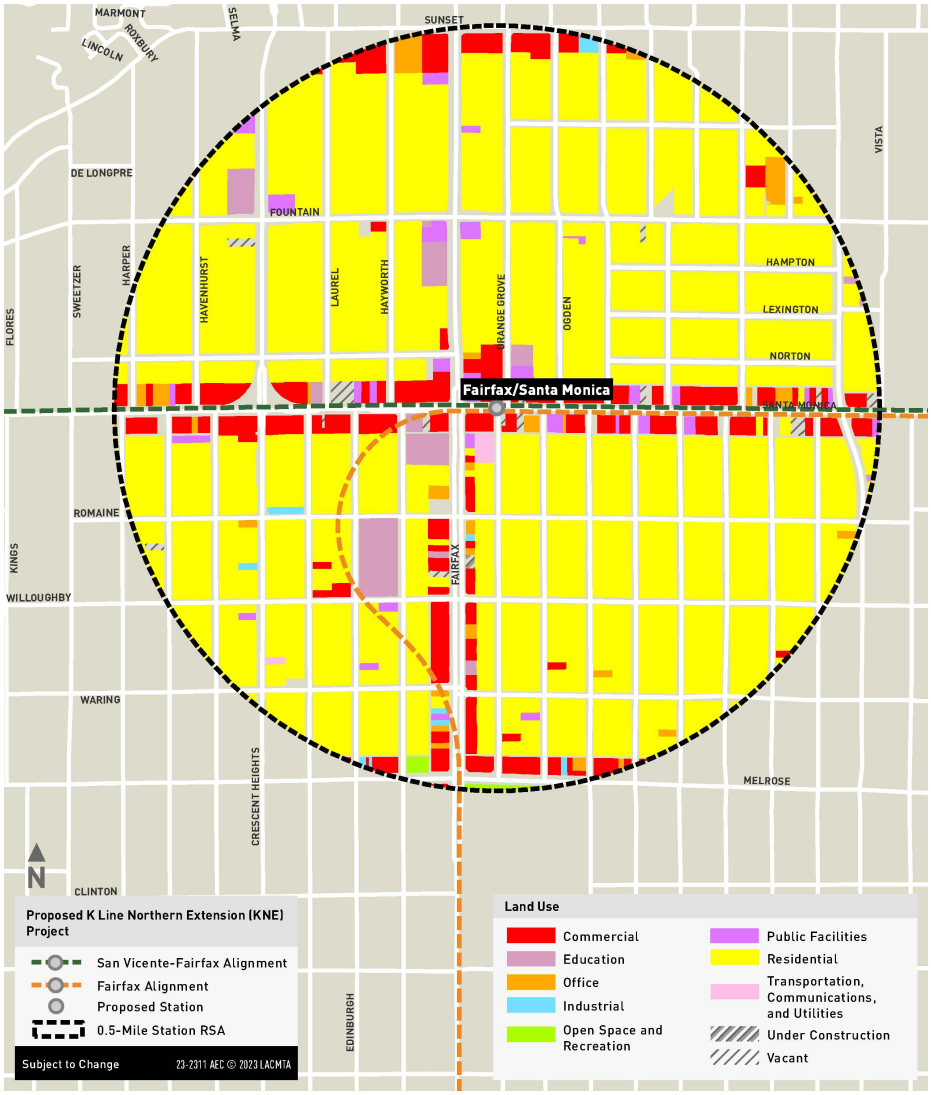
The RSA is characterized by land uses, including commercial, office, residential, public facilities, transportation/communications/utilities, and open space and recreation, as shown in Figure 3.13-7. Commercial and office sites are located along Santa Monica Boulevard. A concentration of single-family residential neighborhoods is located within the station RSA. The San Vicente/Santa Monica Station RSA is located in the City of West Hollywood and contains major destinations, including the West Hollywood Rainbow District along Santa Monica Boulevard, the Melrose Avenue commercial corridor to the south, the Sunset Strip to the north, and the Pacific Design Center. The City of West Hollywood designates the

Pacific Design Center with its own Pacific Design Center Specific Plan. The station would also provide access to public facilities, including West Hollywood Park, the West Hollywood Aquatic and Recreation Center, and the West Hollywood Library.

FAIRFAX/SANTA MONICA STATION

Land uses within the Fairfax/Santa Monica Station RSA consist of commercial, public facilities, education, office, and residential, as shown in Figure 3.13-8, with medium and high-density multifamily neighborhoods and commercial and retail land uses along Santa Monica Boulevard and Fairfax Avenue. In addition to the Santa Monica Commercial Corridor and Fairfax Commercial Corridor, activity centers in the station RSA include multiple synagogues that serve as the historic center of Los Angeles' Jewish community. Figure 3.13-8 illustrates land use patterns within the 0.5-mile RSA of the Fairfax/Santa Monica Station.

FIGURE 3.13-8. EXISTING LAND USES WITHIN FAIRFAX/SANTA MONICA STATION RESOURCE STUDY AREA

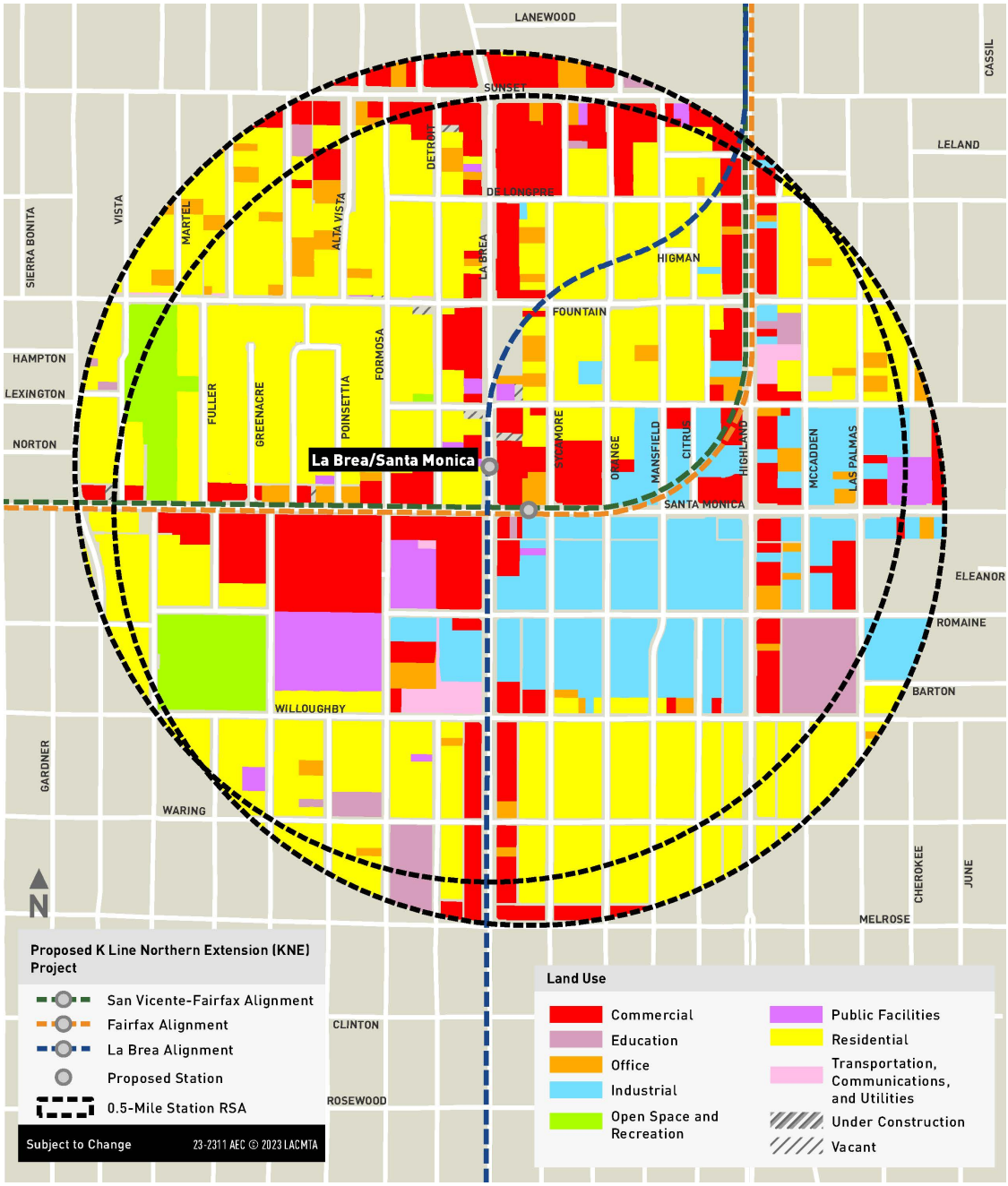


Source: SCAG 2020, ZIMAS 2024

LA BREA/SANTA MONICA STATION

Land uses along Santa Monica Boulevard and La Brea Avenue within the station RSA include commercial, industrial, transportation/communications/utilities, public facilities, office, and residential, as shown in Figure 3.13-9. Industrial land use is concentrated mostly east of La Brea Avenue, between Willoughby Avenue and Lexington Avenue within the City of Los Angeles. Commercial land use is located along Santa Monica Boulevard, La Brea Avenue, Sunset Boulevard, and Melrose Avenue. The rest of the station RSA is characterized by residential land use. The West Hollywood Gateway shopping mall is a large commercial area located on the southwest corner of the La Brea/Santa Monica intersection. Other activity centers include neighborhood-scale recreational areas such as Plummer Park and the Poinsettia Recreation Center, and commercial areas such as the Sycamore District, as well as the American Academy of Dramatic Arts, elementary schools, and synagogues. The La Brea Avenue and Santa Monica Boulevard corridors are characterized by Commercial Arterial uses and Neighborhood Office Commercial uses (City of West Hollywood 2011c).

FIGURE 3.13-9. EXISTING LAND USES WITHIN LA BREA/SANTA MONICA STATION RESOURCE STUDY AREA

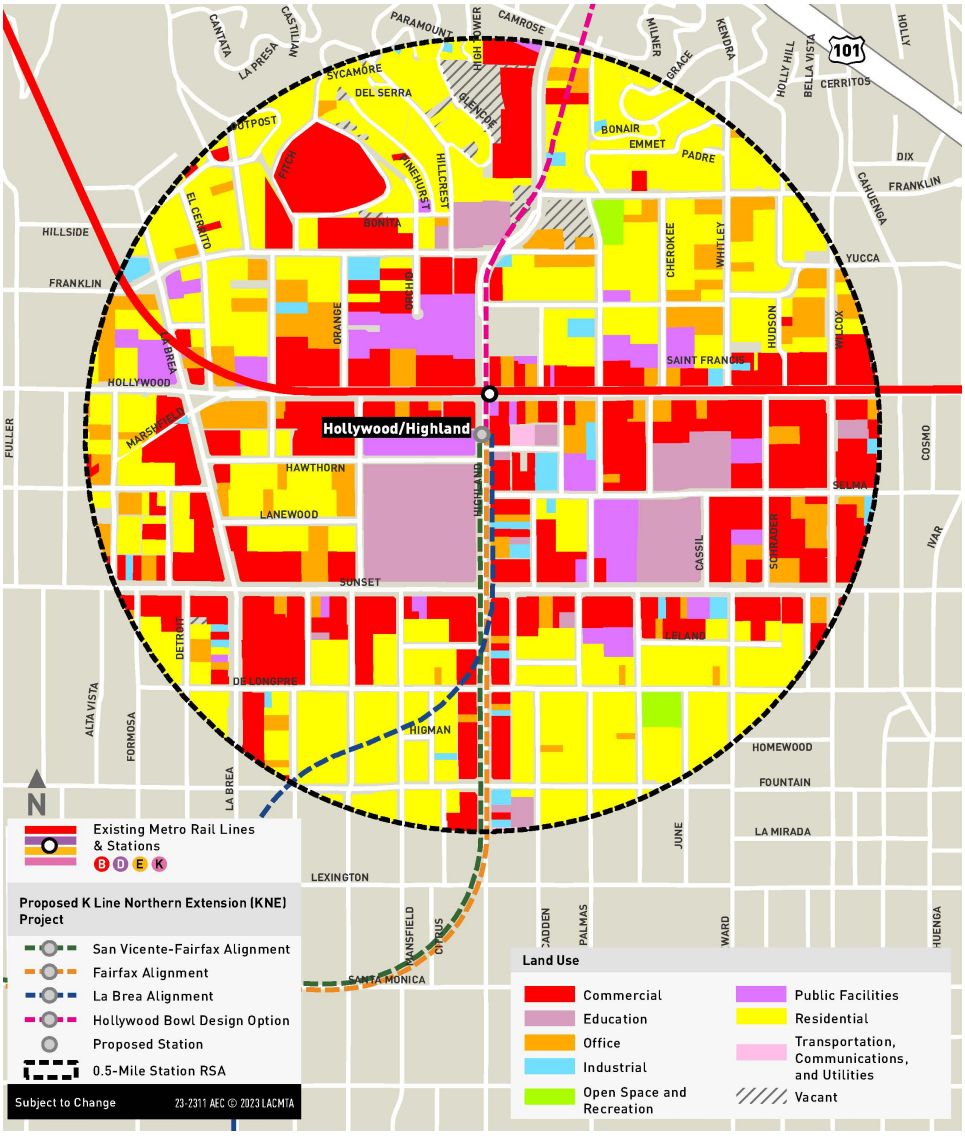


Source: SCAG 2020, ZIMAS 2024
Note: The two 0.5-mile station RSA buffers represent the two station configurations for the KNE San Vicente–Fairfax and Fairfax Alignments and KNE La Brea Alignment.

HOLLYWOOD/HIGHLAND STATION

The Hollywood/Highland Station has a high concentration of commercial land use throughout the 0.5-mile station RSA. Residential land uses are present toward the periphery of the station RSA, primarily north of Franklin Avenue and south of De Longpre Avenue. Other land uses include public facilities and educational facilities. Regional Commercial is the most common land use surrounding the Hollywood/Highland Station, extending along Hollywood Boulevard west to La Brea Avenue with High-Medium density residential as the second-most prevalent land use within the 0.5-mile station RSA (City of Los Angeles 1988), as shown in Figure 3.13-10.

FIGURE 3.13-10. EXISTING LAND USES WITHIN HOLLYWOOD/HIGHLAND STATION RESOURCE STUDY AREA



Source: SCAG 2020, ZIMAS 2024

The Hollywood/Highland Station RSA is located in a commercial shopping, entertainment, and tourism hub focused on the entertainment and movie industry. The intersection of Hollywood Boulevard and Highland Avenue contains major destinations, including the Dolby Theatre, the TCL Chinese Theatre, the Hollywood Museum, and the Hollywood Walk of Fame. Within the RSA are Hollywood High School, religious centers, and historic structures such as the Hollywood Roosevelt Hotel.

3.13.5.1.1.2 KNE FAIRFAX ALIGNMENT

Existing land uses within the RSA for the KNE Fairfax Alignment, shown in Figure 3.13-11, include commercial, residential, education, office, public facilities, open space and recreation, transportation/communities/ utilities, and industrial land uses. Future land uses within the RSA for the KNE Fairfax Alignment, shown in Figure 3.13-12, include commercial, public facility, residential, specific plan, open space and recreation, and industrial land uses.

CRENSHAW/ADAMS STATION

The Crenshaw/Adams Station is the same as the KNE San Vicente–Fairfax Alignment.

MIDTOWN CROSSING STATION

The Midtown Crossing Station is the same as the KNE San Vicente–Fairfax Alignment.

WILSHIRE/FAIRFAX STATION

The Wilshire/Fairfax Station is the same the KNE San Vicente–Fairfax Alignment.

FAIRFAX/3RD STATION

The Fairfax/3rd Station is the same as the KNE San Vicente–Fairfax Alignment.

FAIRFAX/SANTA MONICA STATION

The Fairfax/Santa Monica Station is the same as the KNE San Vicente–Fairfax Alignment.

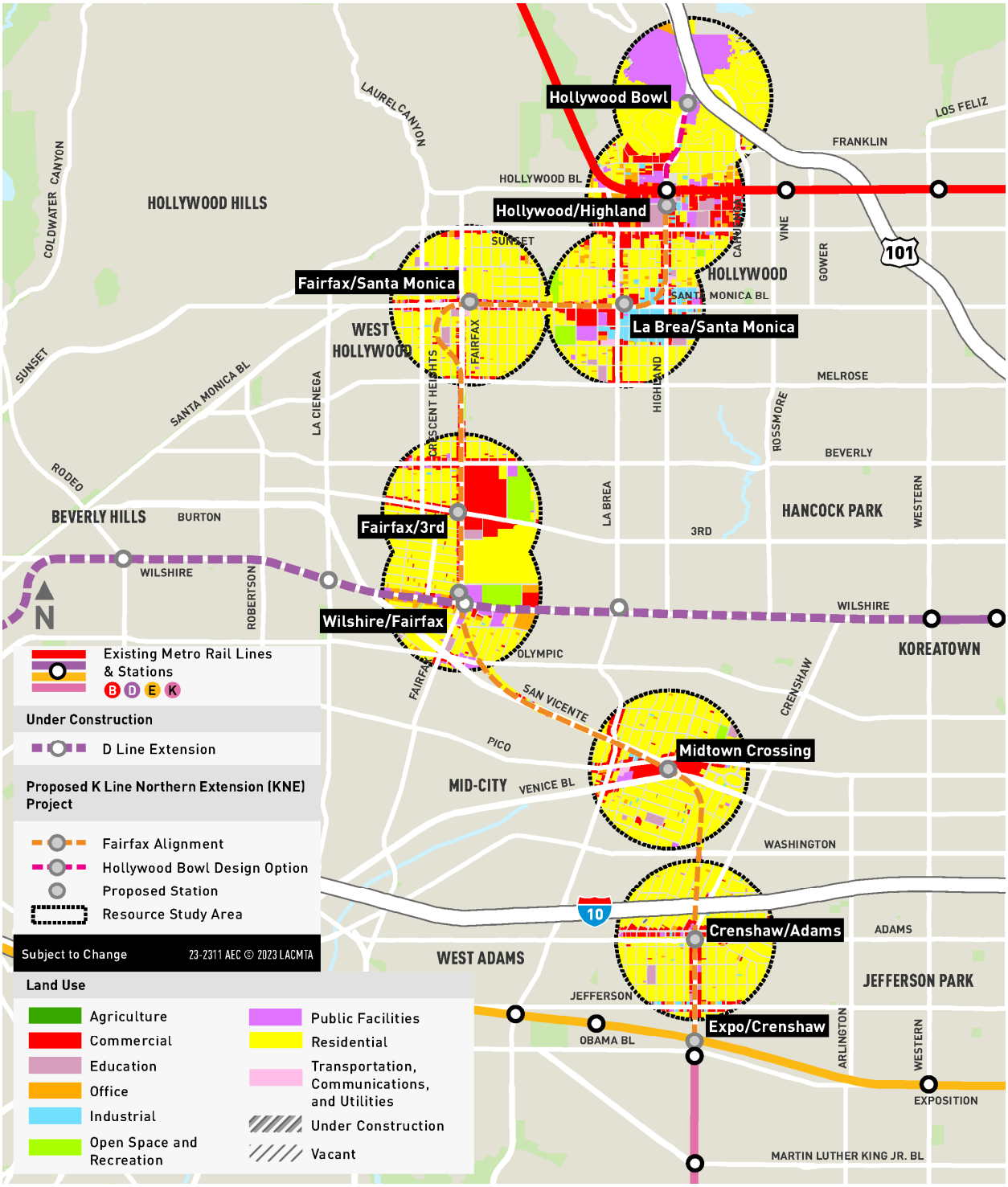
LA BREA/SANTA MONICA STATION

The La Brea/Santa Monica Station is the same as the KNE San Vicente–Fairfax Alignment.

HOLLYWOOD/HIGHLAND STATION

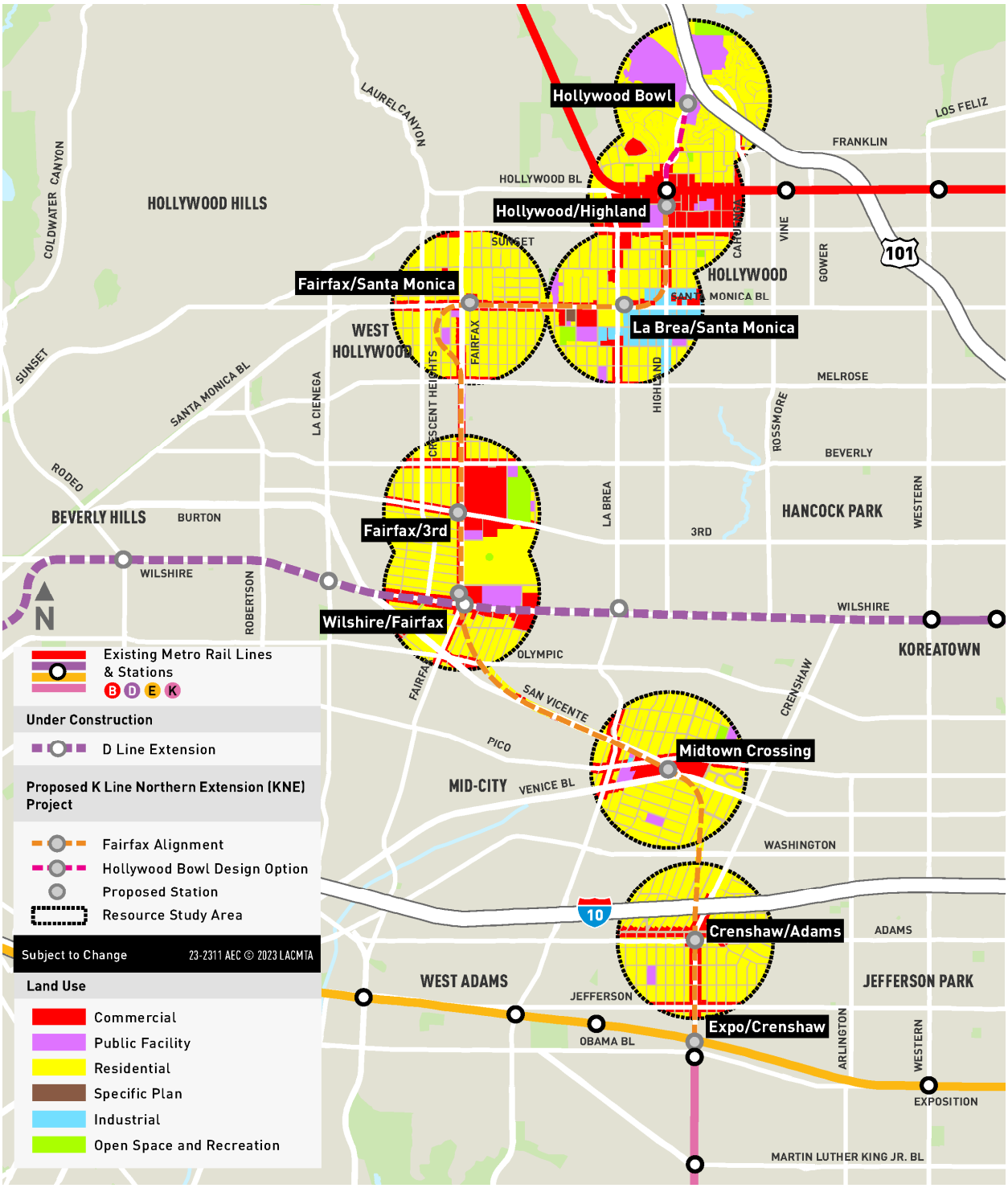
The Hollywood/Highland Station is the same as the KNE San Vicente–Fairfax Alignment.

FIGURE 3.13-11. EXISTING LAND USES WITHIN KNE FAIRFAX ALIGNMENT RESOURCE STUDY AREAS



Source: SCAG 2020, ZIMAS 2024

FIGURE 3.13-12. PLANNED LAND USES WITHIN KNE FAIRFAX ALIGNMENT RESOURCE STUDY AREAS



Source: SCAG 2020, ZIMAS 2024

3.13.5.1.1.3 KNE LA BREA ALIGNMENT

Existing land uses within the RSA for the KNE La Brea Alignment, shown in Figure 3.13-13, include commercial, education, office, mixed residential and commercial, open space and recreation, public facilities, transportation/communications/utilities, residential, and industrial land uses. Future land uses within the RSA for the KNE La Brea Alignment, shown in Figure 3.13-14, include commercial, public facility, residential, specific plan, open space and recreation, and industrial land uses.

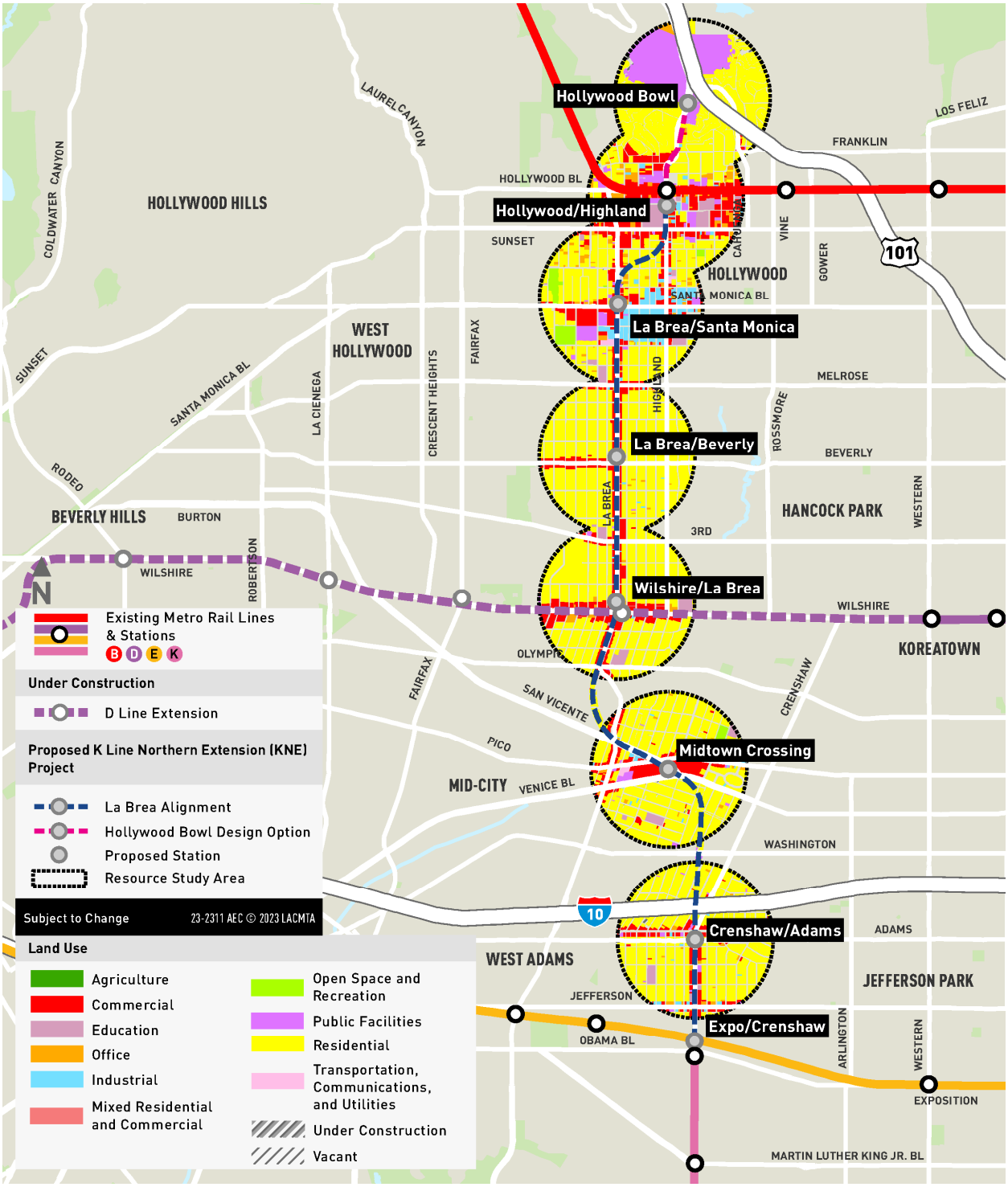
CRENSHAW/ADAMS STATION

The Crenshaw/Adams Station is the same as the KNE San Vicente–Fairfax Alignment.

MIDTOWN CROSSING STATION

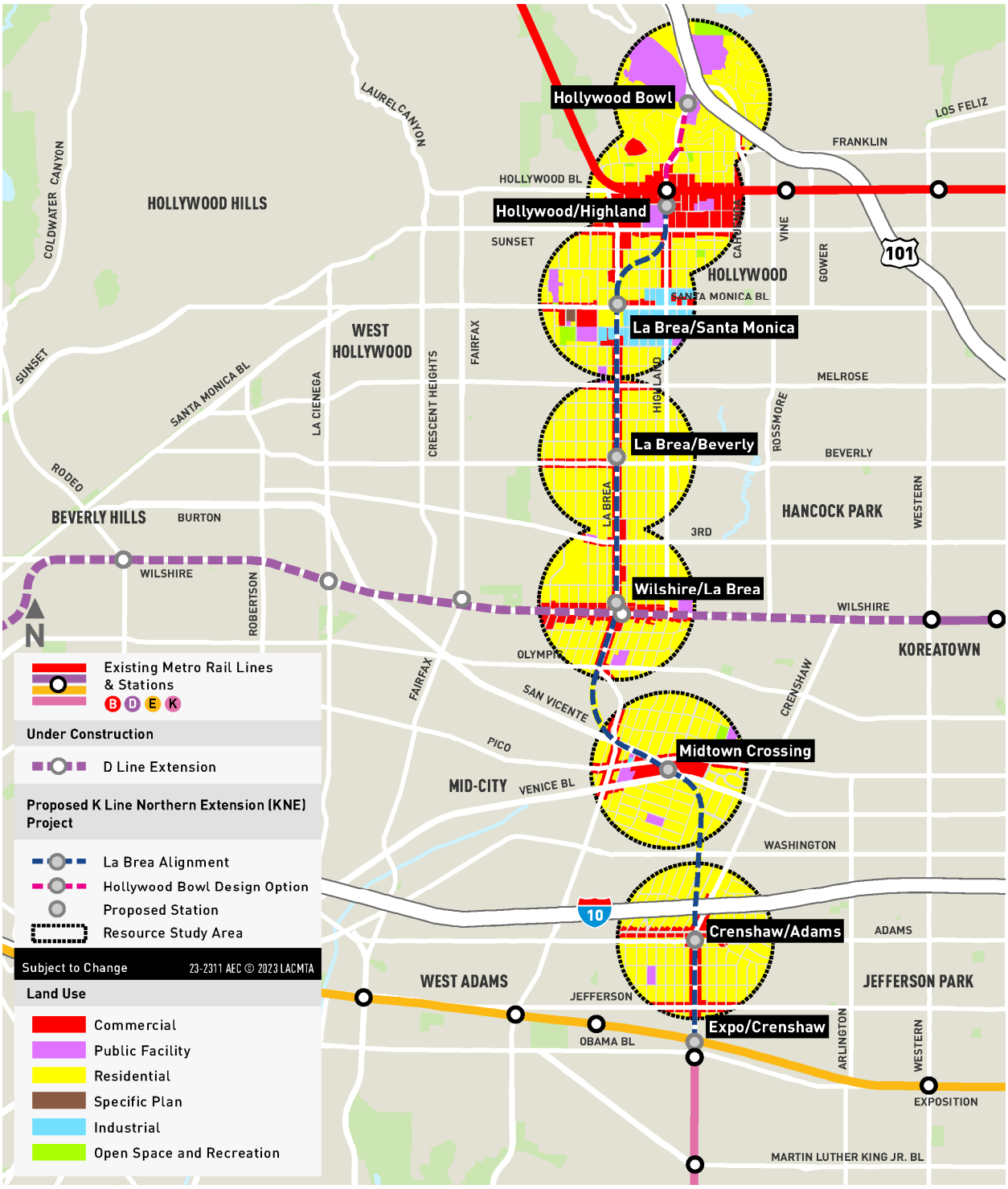
The Midtown Crossing Station is the same as the KNE San Vicente–Fairfax Alignment.

FIGURE 3.13-13. EXISTING LAND USES WITHIN KNE LA BREA ALIGNMENT RESOURCE STUDY AREAS



Source: SCAG 2020, ZIMAS 2024

FIGURE 3.13-14. PLANNED LAND USES WITHIN KNE LA BREA ALIGNMENT RESOURCE STUDY AREAS



Source: SCAG 2020, ZIMAS 2024

WILSHIRE/LA BREA STATION

Land uses along Wilshire Boulevard and La Brea Avenue are mostly classified as residential, with commercial, office, and public facilities uses along Wilshire Boulevard and La Brea Avenue, as shown in Figure 3.13-15. A General Commercial corridor extends north and south along La Brea Avenue, and east and west along Wilshire Boulevard. The highest intensity commercial uses are focused along Wilshire Boulevard, primarily west of La Brea Avenue. Lower intensity commercial uses occur along La Brea Avenue, north of Carling Way and south of 8th Street. Low-density and medium-density housing districts comprise the two most significant portions of the Wilshire/La Brea Station RSA (City of Los Angeles 2016d). Activity centers include the Korean Cultural Center, which is a space dedicated to celebrating Korean culture and heritage within the greater Los Angeles community. The Korean Cultural Center is 0.25 mile west of the proposed Wilshire/La Brea Station.

LA BREA/BEVERLY STATION

Land uses within the proposed La Brea/Beverly Station RSA include residential, commercial, office, public facilities, and open space, as shown in Figure 3.13-15. The proposed station is located at the intersection of two low-intensity commercial corridors and surrounded by neighborhoods of primary low-density housing. Per the Wilshire Community Plan (City of Los Angeles 2016d), other uses within the station RSA include mixed commercial uses and public facilities, particularly along Beverly Boulevard concentrated west of La Brea Avenue, and along La Brea Avenue north and south of Beverly Boulevard. Located within the center of a major Jewish community, the area surrounding the proposed La Brea/Beverly Station is characterized by several Jewish institutions, including synagogues and Jewish day schools, or *yeshivas*.

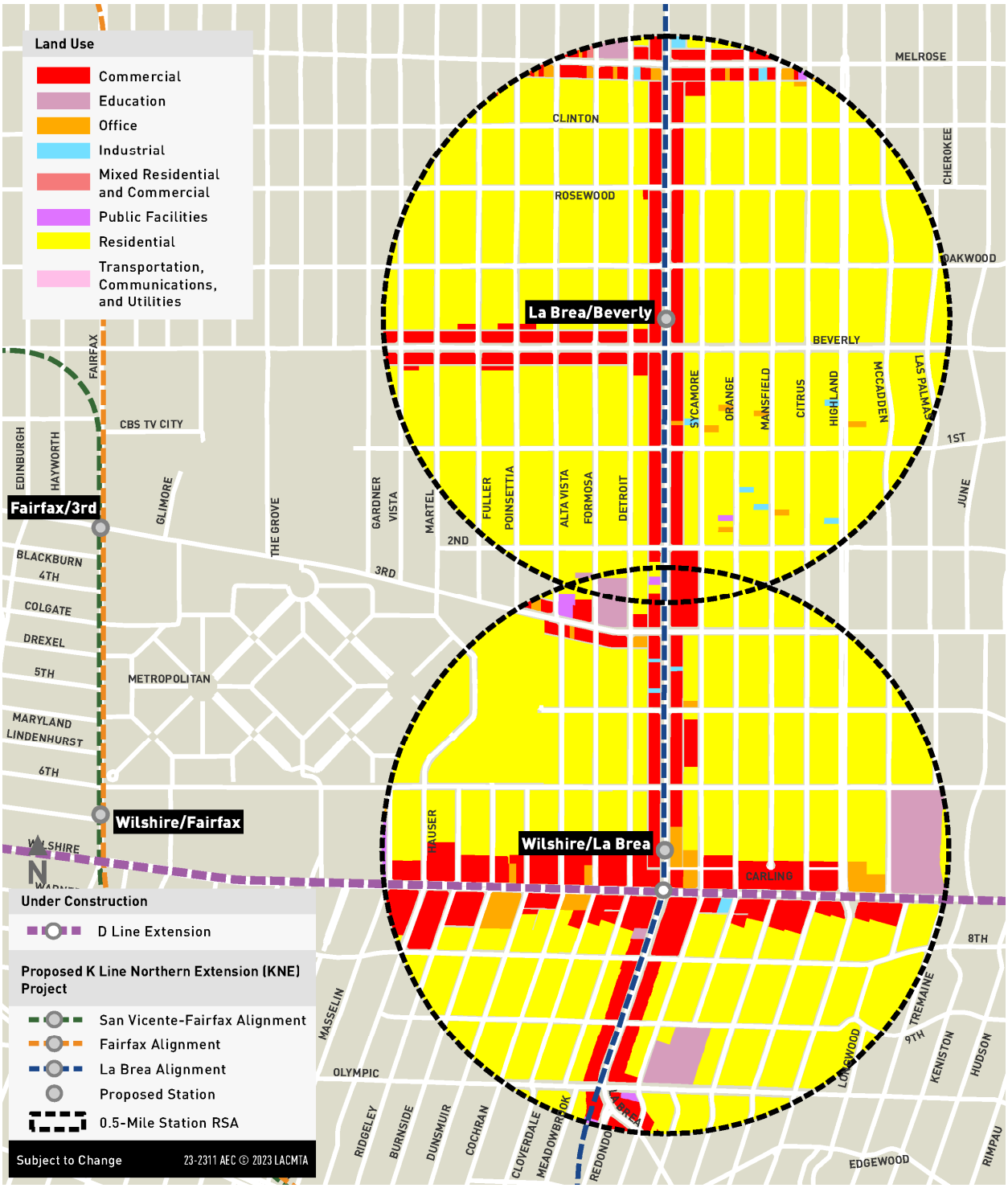
LA BREA/SANTA MONICA STATION

The La Brea/Santa Monica Station is the same as the KNE San Vicente–Fairfax Alignment.

HOLLYWOOD/HIGHLAND STATION

The Hollywood/Highland Station is the same as the KNE San Vicente–Fairfax Alignment.

FIGURE 3.13-15. EXISTING LAND USES WITHIN WILSHIRE/LA BREA STATION AND LA BREA/BEVERLY STATION RESOURCE STUDY AREAS

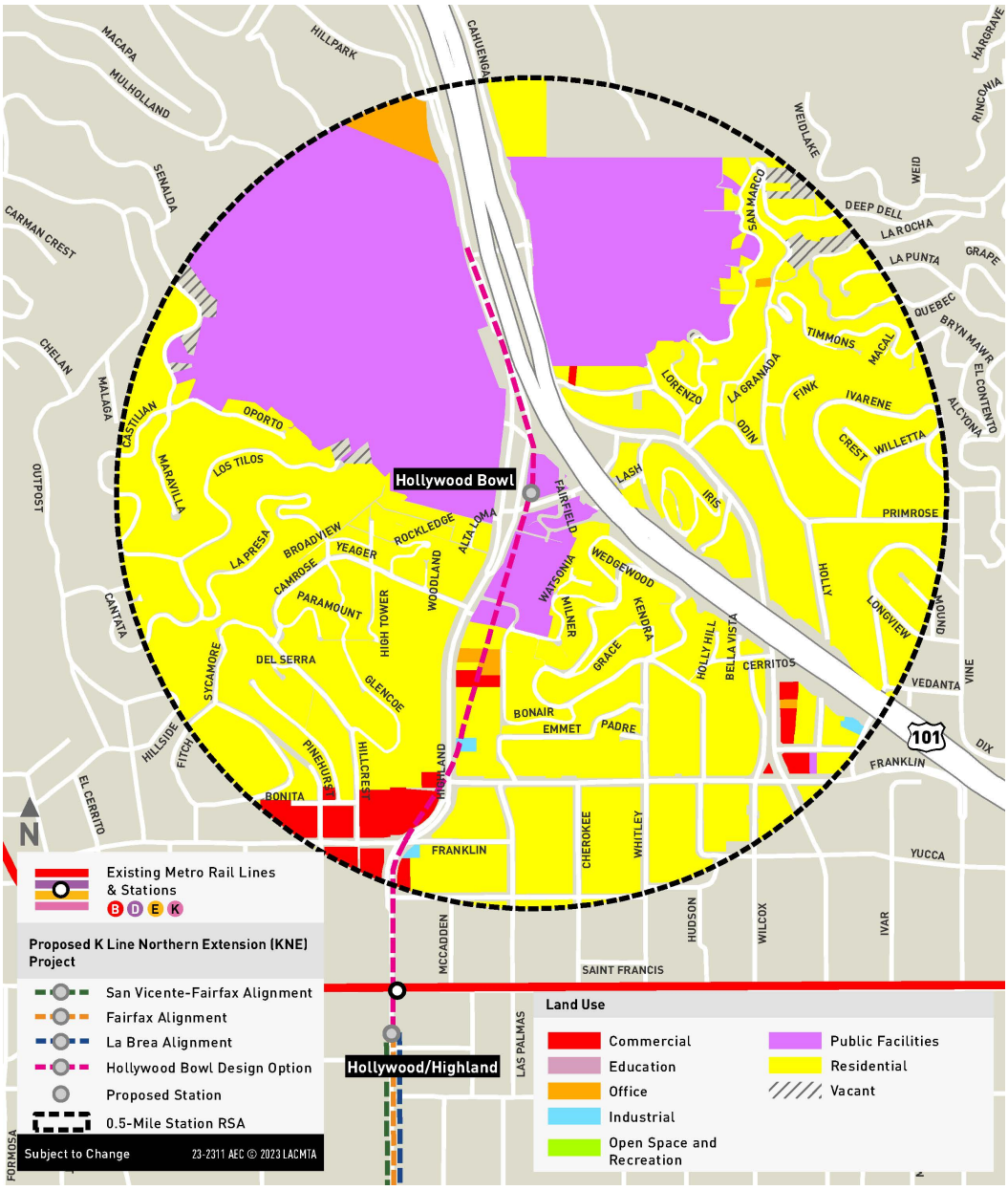


Source: SCAG 2020, ZIMAS 2024

3.13.5.1.2 HOLLYWOOD BOWL DESIGN OPTION

The Hollywood Bowl Design Option RSA is largely characterized by public facilities and residential land uses, as well as some commercial and office uses, as shown in Figure 3.13-16. The Hollywood Bowl serves as a major regional activity center for entertainment and live music. Other activity centers include the Hollywood Heritage Museum to the southeast of the proposed Hollywood Bowl Station.

FIGURE 3.13-16. EXISTING LAND USES WITHIN HOLLYWOOD BOWL DESIGN OPTION RESOURCE STUDY AREA



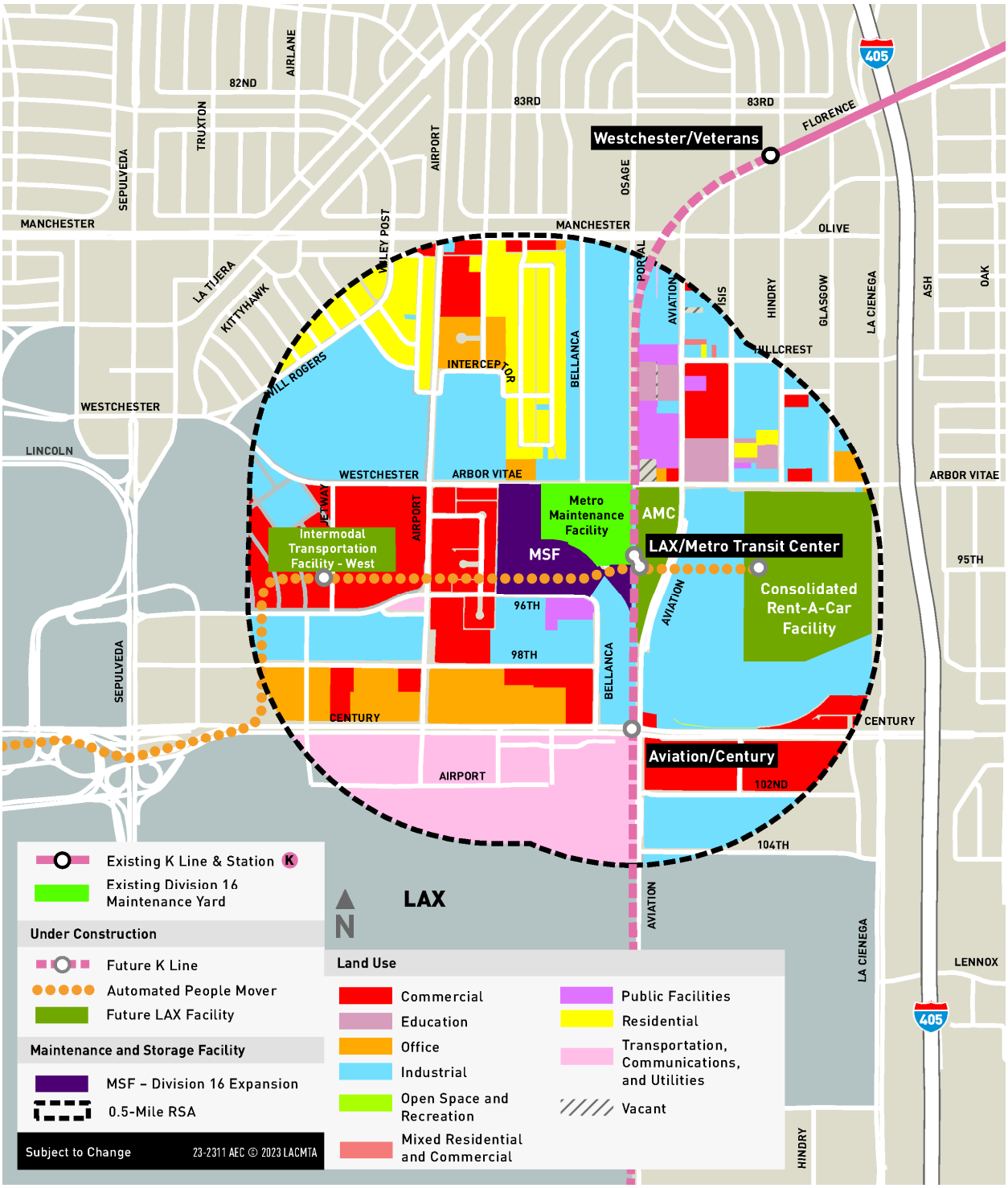
Source: SCAG 2020, ZIMAS 2024

3.13.5.1.3 MAINTENANCE AND STORAGE FACILITY

The proposed MSF is located between Arbor Vitae Street, 96th Street, Portal Avenue, and Airport Boulevard adjacent to Metro's Division 16 yard. The parcels identified for the proposed MSF are designated as industrial. Data from SCAG and the City of Los Angeles Zone Information and Map Access System (ZIMAS) were both used to verify parcel information (ZIMAS 2024). Within the MSF RSA, multiple parcels are also characterized as commercial, industrial, office, residential, and public facilities, including Metro's Division 16 yard, the K Line tracks, the Carl Nielsen Youth Park, and a U.S. Postal Service branch. Metro's Division 16 yard is located on the northeastern parcel identified for the proposed MSF site. Figure 3.13-17 shows the various land use designations within the MSF RSA.

The area surrounding the MSF is characterized largely by industrial and residential land uses with multiple car rental companies and hotels within a 0.5-mile radius. The existing K Line tracks run along the eastern border of the proposed MSF, and the Carl Nielsen Youth Park is about a 0.5 mile northwest of the MSF. The U.S. Postal Service branch is located approximately 0.25 mile north of the MSF. The Westchester–Playa del Rey Community Plan Area identifies future land use for this area as light industrial, and it is zoned as manufacturing (City of Los Angeles 2004a).

FIGURE 3.13-17. EXISTING LAND USES WITHIN MSF RESOURCE STUDY AREA



Source: SCAG 2020, ZIMAS 2024

3.13.6 PROJECT MEASURES

Project measures are design features, best management practices, or other commitments that Metro would implement as part of all proposed alignments and stations, the design option, and the MSF to reduce or avoid environmental effects associated with project construction and operation. Project measures are not the same as mitigation measures, which are used to reduce an environmental impact's significance level. Where applicable, project measures are also discussed in Section 3.13.7 as part of the evaluation of environmental impacts.

No project measures specific to land use and planning have been identified.

3.13.7 IMPACT EVALUATION AND MITIGATION MEASURES

This analysis presents the construction and operational impacts for land use and planning, as well as any applicable mitigation measures associated with KNE. A summary of the impact conclusions and applicable mitigation measures is found in Table 3.13-2 in Section 3.13.7.4.

3.13.7.1 IMPACT LUP-1: PHYSICALLY DIVIDE AN ESTABLISHED COMMUNITY

Impact LUP-1: Would the project physically divide an established community?

3.13.7.1.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.13.7.1.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction activities associated with the KNE San Vicente–Fairfax Alignment would not result in permanent physical divisions of established communities in the RSA. Full and partial street closures would be required during construction to accommodate cut-and-cover construction at proposed stations. Sidewalk closures and the installation of safety barriers to delineate construction work zones would temporarily limit property access. However, these closures would be temporary and periodic, and safe access and crossings throughout the community would be maintained. In addition, as set forth in project measure PM TRA-2, as described in Section 3.16, Transportation, the project shall follow Metro standard practices that include scheduling of lane and/or road closures to minimize disruptions and require preparation of a construction transportation management plan (TMP) to reduce the disruption caused by construction work zones. Metro would notify and work with surrounding communities regarding the construction schedule and would use wayfinding signage to inform the public of reroutes due to closed pedestrian areas and roadways. Section 3.16, Transportation, further analyzes impacts on circulation and pedestrian access to adjoining or nearby properties.

Construction of the alignment would require property acquisition and temporary construction easements for some construction activities, including construction staging, cut-and-cover activities, street reconstruction, demolition, and utility relocation and installation. The temporary construction easements (i.e., the areas needed temporarily during construction in addition to the actual project footprint) would vary along the KNE San Vicente–Fairfax Alignment depending on the type of construction and adjacent land use. The right-of-way (ROW) drawings in Appendix 2-B, Advanced Conceptual Engineering Drawings,

provide more details regarding potential property acquisitions. The properties under construction easements would not undergo any zoning classification changes as part of KNE.

Properties acquired for construction activities could, upon completion of the construction activities, be available for joint development, which integrates development of transit and non-transit improvements with transit projects physically or functionally related to commercial, residential, or mixed-use development. These improvements would be subject to standard planning and permitting review processes separate from this environmental review process. Temporary property acquisitions would be limited to properties currently designated for commercial, public facilities, transportation/ communications/utilities, office, industrial, and vacant land uses. Metro is working to avoid acquisitions of residential properties, educational institutions, recreational facilities, health and medical services, cultural institutions, places of worship, and government facilities. Metro would also work to protect access to private properties. Temporary property acquisition for construction of the alignment would not physically divide an established community.

The stations proposed with the alignment are located primarily on land designated for commercial, public facilities, office, transportation/communications/utilities, vacant, and industrial uses. Each of the station entrance options, where project components would be aboveground, are primarily located within the public ROW or on private properties where existing land use is designated as commercial, industrial, public facility, and transportation/communications/utilities. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.13.7.1.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. The KNE San Vicente–Fairfax Alignment would operate within or below the existing public ROW. The station portals for the underground stations would be designed to integrate with the existing character of the surrounding land uses. The alignment would operate underground beneath residential, commercial, industrial, and educational public facilities, as well as open space and recreation land uses. However, no operational impacts to residential properties would occur because the light rail would operate below ground and would not physically divide an established community.

Operation of the alignment would require property acquisitions for some operational systems, including ventilation and egress shafts. All operational systems would be located within the public ROW or on properties already acquired for construction of the alignment. Property acquisitions would be limited to land uses designated for commercial, public facilities, or industrial uses. Metro is working to avoid acquisitions of residential properties, educational institutions, recreational facilities, health and medical services, cultural institutions, places of worship, and government facilities. Operation of the alignment would be consistent with future commercial, public facility, and industrial uses. As described in Section 3.16, Transportation, and as set forth in project measure PM TRA-1 in that section, Metro would enhance access to the proposed stations by providing first/last mile improvements to key destinations and transit connections. As a result, operation of the project would have a positive effect on transportation access to the surrounding areas. Operations would support the future land use characteristics of the transportation corridor, would not affect access to existing properties, and would not physically divide an established community.

The stations proposed with the alignment are located primarily on land planned for commercial, public facility, and industrial land uses. Property acquisitions would be limited to properties designated as commercial, public facilities, office, transportation/communications/utilities, vacant, or industrial uses. Metro is working to avoid acquisitions of educational institutions, recreational facilities, health and medical services, cultural institutions, places of worship, and government facilities.[1] Operation of the proposed stations would be consistent with future commercial, public facility, and industrial land uses as well as the land use characteristics of the transportation corridor. Each of the station entrance options, where project components would be aboveground, are primarily located within the public ROW or on private properties where existing land use is designated as commercial, industrial, public facility, and transportation/communications/utilities, and would not physically divide an established community. Operation of the stations would not affect property access and would not physically divide an established community. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.13.7.1.2 KNE FAIRFAX ALIGNMENT

3.13.7.1.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction activities associated with the KNE Fairfax Alignment would not result in permanent physical divisions of established communities in the RSA. Full and partial street closures would be required during construction to accommodate cut-and-cover construction at proposed stations. Sidewalk closures and the installation of safety barriers to delineate construction work zones would temporarily limit property access. However, these closures would be temporary and periodic, and safe access and crossings throughout the community would be maintained. In addition, as set forth in project measure PM TRA-2, as described in Section 3.16, Transportation, the project shall follow Metro standard practices that include scheduling of lane and/or road closures to minimize disruptions and require preparation of a construction TMP to reduce the disruption caused by construction work zones. Metro would notify and work with surrounding communities regarding the construction schedule and would use wayfinding signage to inform the public of reroutes due to closed pedestrian areas and roadways. Section 3.16, Transportation, further analyzes impacts on circulation and pedestrian access to adjoining or nearby properties.

Construction of the alignment would require property acquisition and temporary construction easements for some construction activities, including construction staging, cut-and-cover activities, street reconstruction, demolition, and utility relocation and installation. The temporary construction easements (i.e., the areas needed temporarily during construction in addition to the actual project footprint) would vary along the KNE Fairfax Alignment depending on the type of construction and adjacent land use. The ROW drawings in Appendix 2-B, Advanced Conceptual Engineering Drawings, provide more details regarding potential property acquisitions. The properties under construction easements would not undergo any zoning classification changes as part of KNE.

[1] Section 3.5, Communities, Population and Housing, further discusses the potential for impacts related to property acquisitions.

Properties acquired for construction activities could, upon completion of the construction activities, be available for joint development, which integrates development of transit and non-transit improvements with transit projects physically or functionally related to commercial, residential, or mixed-use development. These improvements would be subject to standard planning and permitting review processes separate from this environmental review process. Temporary property acquisitions would be limited to properties currently designated for commercial, public facilities, transportation/ communications/utilities, office, industrial, and vacant land uses. Metro is working to avoid acquisitions of residential properties, educational institutions, recreational facilities, health and medical services, cultural institutions, places of worship, and government facilities. Metro would also work to protect access to private properties. Temporary property acquisition for construction of the alignment would not physically divide an established community.

The stations proposed with the alignment are located primarily on land designated for commercial, public facilities, office, transportation/communications/utilities, vacant, and industrial uses. Each of the station entrance options, where project components would be aboveground, are primarily located within the public ROW or on private properties where existing land use is designated as commercial, industrial, public facility, and transportation/communications/utilities. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.13.7.1.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. The KNE Fairfax Alignment would operate within or below the existing public ROW. The station portals for the underground stations would be designed to integrate with the existing character of the surrounding land uses. The alignment would operate underground beneath residential, commercial, industrial, and educational public facilities, as well as open space and recreation land uses. However, no operational impacts to residential properties would occur because the light rail would operate below ground and would not physically divide an established community.

Operation of the alignment would require property acquisitions for some operational systems, including ventilation and egress shafts. All operational systems would be located within the public ROW or on properties already acquired for construction of the alignment. Property acquisitions would be limited to land uses designated for commercial, public facilities, or industrial uses. Metro is working to avoid acquisitions of residential properties, educational institutions, recreational facilities, health and medical services, cultural institutions, places of worship, and government facilities. Operation of the alignment would be consistent with future commercial, public facility, and industrial uses. As described in Section 3.16, Transportation, and as set forth in project measure PM TRA-1 in that section, Metro would enhance access to the proposed stations by providing first/last mile improvements to key destinations and transit connections. As a result, operation of the project would have a positive effect on transportation access to the surrounding areas. Operations would support the future land use characteristics of the transportation corridor, would not affect access to existing properties, and would not physically divide an established community.

The stations proposed with the alignment are located primarily on land planned for commercial, public facility, and industrial land uses. Property acquisitions would be limited to properties designated as commercial, public facilities, office, transportation/communications/utilities, vacant, or industrial uses. Metro is working to avoid acquisitions of educational institutions, recreational facilities, health and medical services, cultural institutions, places of worship, and government facilities.[2] Operation of the proposed stations would be consistent with future commercial, public facility, and industrial land uses as well as the land use characteristics of the transportation corridor. Each of the station entrance options, where project components would be aboveground, are primarily located within the public ROW or on private properties where existing land use is designated as commercial, industrial, public facility, and transportation/communications/utilities, and would not physically divide an established community. Operation of the stations would not affect property access and would not physically divide an established community. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.13.7.1.3 KNE LA BREA ALIGNMENT

3.13.7.1.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction activities associated with the KNE La Brea Alignment would not result in permanent physical divisions of established communities in the RSA. Full and partial street closures would be required during construction to accommodate cut-and-cover construction at proposed stations. Sidewalk closures and the installation of safety barriers to delineate construction work zones would temporarily limit property access. However, these closures would be temporary and periodic, and safe access and crossings throughout the community would be maintained. In addition, as set forth in project measure PM TRA-2, as described in Section 3.16, Transportation, the project shall follow Metro standard practices that include scheduling of lane and/or road closures to minimize disruptions and require preparation of a construction TMP to reduce the disruption caused by construction work zones. Metro would notify and work with surrounding communities regarding the construction schedule and would use wayfinding signage to inform the public of reroutes due to closed pedestrian areas and roadways. Section 3.16, Transportation, further analyzes impacts on circulation and pedestrian access to adjoining or nearby properties.

Construction of the alignment would require property acquisition and temporary construction easements for some construction activities, including construction staging, cut-and-cover activities, street reconstruction, demolition, and utility relocation and installation. The temporary construction easements (i.e., the areas needed temporarily during construction in addition to the actual project footprint) would vary along the KNE La Brea Alignment depending on the type of construction and adjacent land use. The ROW drawings in Appendix 2-B, Advanced Conceptual Engineering Drawings, provide more details regarding potential property acquisitions. The properties under construction easements would not undergo any zoning classification changes as part of KNE.

[2] Section 3.5, Communities, Population and Housing, further discusses the potential for impacts related to property acquisitions.

Properties acquired for construction activities could, upon completion of the construction activities, be available for joint development, which integrates development of transit and non-transit improvements with transit projects physically or functionally related to commercial, residential, or mixed-use development. These improvements would be subject to standard planning and permitting review processes separate from this environmental review process. Temporary property acquisitions would be limited to properties currently designated for commercial, public facilities, transportation/ communications/utilities, office, industrial, and vacant land uses. Metro is working to avoid acquisitions of residential properties, educational institutions, recreational facilities, health and medical services, cultural institutions, places of worship, and government facilities. Metro would also work to protect access to private properties. Temporary property acquisition for construction of the alignment would not physically divide an established community.

The stations proposed with the alignment are located primarily on land designated for commercial, public facilities, office, transportation/communications/utilities, vacant, and industrial uses. Each of the station entrance options, where project components would be aboveground, are primarily located within the public ROW or on private properties where existing land use is designated as commercial, industrial, public facility, and transportation/communications/utilities. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.13.7.1.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. The KNE La Brea Alignment would operate within or below the existing public ROW. The station portals for the underground stations would be designed to integrate with the existing character of the surrounding land uses. The alignment would operate underground beneath residential, commercial, industrial, and educational public facilities, as well as open space and recreation land uses. However, no operational impacts to residential properties would occur because the light rail would operate below ground and would not physically divide an established community.

Operation of the alignment would require property acquisitions for some operational systems, including ventilation and egress shafts. All operational systems would be located within the public ROW or on properties already acquired for construction of the alignment. Property acquisitions would be limited to land uses designated for commercial, public facilities, or industrial uses. Metro is working to avoid acquisitions of residential properties, educational institutions, recreational facilities, health and medical services, cultural institutions, places of worship, and government facilities. Operation of the alignment would be consistent with future commercial, public facility, and industrial uses. As described in Section 3.16, Transportation, and as set forth in project measure PM TRA-1 in that section, Metro would enhance access to the proposed stations by providing first/last mile improvements to key destinations and transit connections. As a result, operation of the project would have a positive effect on transportation access to the surrounding areas. Operations would support the future land use characteristics of the transportation corridor, would not affect access to existing properties, and would not physically divide an established community.

The stations proposed with the alignment are located primarily on land planned for commercial, public facility, and industrial land uses. Property acquisitions would be limited to properties designated as commercial, public facilities, office, transportation/communications/utilities, vacant, or industrial uses. Metro is working to avoid acquisitions of educational institutions, recreational facilities, health and medical services, cultural institutions, places of worship, and government facilities.[3] Operation of the proposed stations would be consistent with future commercial, public facility, and industrial land uses as well as the land use characteristics of the transportation corridor. Each of the station entrance options, where project components would be aboveground, are primarily located within the public ROW or on private properties where existing land use is designated as commercial, industrial, public facility, and transportation/communications/utilities, and would not physically divide an established community. Operation of the stations would not affect property access and would not physically divide an established community. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.13.7.1.4 HOLLYWOOD BOWL DESIGN OPTION

3.13.7.1.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the Hollywood Bowl Design Option would continue north beneath Highland Avenue. The design option is proposed for the alternate terminus station at the Hollywood Bowl. Potential construction staging areas for the design option have been identified at the existing Hollywood Bowl Parking Lots (Lot B on Highland Avenue, and Lots C and D on Odin Street), as well as near Pilgrimage Bridge along Cahuenga Boulevard and US-101.

Construction activities for the Hollywood Bowl Design Option would not result in permanent physical divisions of established communities in the RSA. Full and partial street closures would be required for construction staging areas. Sidewalk closures and the installation of safety barriers to delineate construction work zones would temporarily limit property access. However, these closures would be temporary and periodic, and safe access and crossings throughout the community would be maintained. As set forth in PM TRA-2, as described in Section 3.16, Transportation, the project shall follow Metro standard practices that include scheduling of lane and/or road closures to minimize disruptions and require preparation of a construction TMP to reduce the disruption caused by construction work zones. Temporary construction detours would provide similar access during street and sidewalk closures.

Construction of the Hollywood Bowl Design Option would require property acquisition and temporary construction easements for some construction activities, including construction staging, installation of systems and facilities, street reconstruction, demolition, and utility relocation and installation work. The temporary construction easements (i.e., the areas needed temporarily during construction in addition to the actual project footprint) would vary along the design option depending on the type of construction and adjacent land use. The ROW drawings in Appendix 2-B, Advanced Conceptual Engineering Drawings, provide more details regarding potential property acquisitions. The properties under construction easements would not undergo any zoning classification changes as part of KNE.

[3] Section 3.5, Communities, Population and Housing, further discusses the potential for impacts related to property acquisitions.

Properties acquired for construction activities would, upon completion of the construction activities, be available for joint development, which integrates development of transit and non-transit improvements with transit projects physically or functionally related to commercial, residential, or mixed-use development. These improvements would be subject to standard planning and permitting review processes separate from this environmental review process. Temporary property acquisition would be limited to properties designated for commercial, public facility, and vacant land uses. Metro is working to avoid acquisitions of residential properties, educational institutions, recreational facilities, health and medical services, cultural institutions, places of worship, and government facilities. Metro would also work to protect access to private properties. Temporary property acquisition for construction of the alignment would not physically divide an established community. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.13.7.1.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. The Hollywood Bowl Design Option would operate mostly under the public ROW on Highland Avenue. Since the underground segment is below grade, it would not physically disrupt future land uses. Operation of the design option would require property acquisitions for some operational systems and facilities. Property acquisitions would be limited to properties currently zoned for commercial, public facility, and vacant land uses. Metro is working to avoid acquisitions of educational institutions, recreational facilities, health and medical services, cultural institutions, places of worship, and government facilities. Operation of the design option would be consistent with future public facility land uses and the land use characteristics of the transportation corridor. Operation of the design option would not affect property access and would not physically divide an established community. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.13.7.1.5 MAINTENANCE AND STORAGE FACILITY

3.13.7.1.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the proposed MSF would require site preparation, demolition of existing structures, utility relocation, construction of storage tracks and lead tracks, grading, paving, and building construction. Construction would occur entirely within parcels identified within the MSF RSA. Temporary barriers and fencing would be placed along the perimeter of the construction areas. Construction activities associated with the MSF would not permanently physically divide any established communities in the RSA. Public roadways leading to the MSF would remain open. Any limitations on access would be temporary, alternative routes would be provided, and an established community would not be permanently divided.

Construction of the MSF would not create any permanent physical divisions within the surrounding community because construction activities would be temporary. Full and partial street and sidewalk closures during the construction period may be required. However, the closures would be temporary and periodic, and safe access and crossings throughout the community would be maintained. As described in PM TRA-2, discussed in Section 3.16, Transportation, Metro standard practices require lane and/or road closures to be scheduled to minimize disruptions, and they require preparation of a TMP to reduce the

disruption caused by construction work zones. The TMP would require Metro to work with surrounding communities to establish a construction schedule that notifies the public of construction in advance and to develop wayfinding signage (e.g., closed pedestrian areas, rerouting directions). Section 3.16, Transportation, further analyzes potential impacts to circulation and pedestrian access to adjoining or nearby properties.

Construction of the MSF would require property acquisition and construction easements for some construction activities, including construction staging, installation of systems and facilities, demolition, and utility relocation and installation work. The temporary construction easements (i.e., the areas needed temporarily during construction in addition to the actual project footprint) could vary depending on the type of construction and adjacent land use. The ROW drawings in Appendix 2-B, Advanced Conceptual Engineering Drawings, provide more details regarding potential property acquisitions. The properties under construction easements would not undergo any zoning classification changes as part of KNE.

Metro is working to avoid acquisitions of sensitive land uses and does not anticipate acquiring residential properties, churches, schools, parks, or other sensitive land uses for construction activities of the MSF. Construction of the MSF would not affect access to existing properties and would not physically divide an established community. Public roadways leading to the MSF would remain open. Therefore, the MSF would have a less than significant impact during construction.

3.13.7.1.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the MSF would require the acquisition of properties that are located on land designated as industrial, commercial, office, and transportation/communications/utilities south and west of the Division 16 maintenance yard. The ROW drawings in Appendix 2-B, Advanced Conceptual Engineering Drawings, provide greater detail on potential property acquisitions. Surrounding land uses would continue to have property access since operations are limited to parcels identified for the MSF footprint and would not physically divide an established community. Operation of the MSF would not require the closure of any public roads critical to circulation within a community or between communities, and would be located primarily on existing parcels designated for commercial, office, transportation/communications/utilities, and industrial uses. As a result, the MSF would not physically divide an established community. Therefore, the MSF would have a less than significant impact during operation.

3.13.7.2 IMPACT LUP-2: CONFLICT WITH ANY LAND USE PLAN, POLICY, OR REGULATION

Impact LUP-2: Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

3.13.7.2.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.13.7.2.1.1 CONSTRUCTION IMPACTS

No Impact. Construction activities for the KNE San Vicente–Fairfax Alignment and proposed stations would be temporary and would not conflict with applicable regional and local land use plans, policies, and regulations identified above and summarized in Table 3.13-1. Construction of the alignment and proposed stations would support the policies of the SCAG 2020-2045 RTP/SCS (SCAG 2020) by providing jurisdictions the opportunity to develop compact communities around the public transit system; by providing an alternative to automobile travel; by providing another mode of transportation to residents, visitors, and employees within the vicinity of the project to access regional destinations and employment areas; and by reducing overall air quality emissions and traffic congestion.

The alignment and proposed stations would require property acquisitions and construction easements for some construction activities, including construction staging, installation of systems and facilities, street reconstruction, demolition, and utility relocation and installation work. The temporary construction easements (i.e., the areas needed temporarily during construction in addition to the actual project footprint) would vary along the alignments and proposed stations, depending on the type of construction and adjacent land use. The properties under construction easements would not undergo any zoning classification changes as part of KNE. Properties acquired for construction activities could, upon completion of the construction activities, be available for joint development, which integrates development of transit and non-transit improvements with transit projects physically or functionally related to commercial, residential, or mixed-use development. These improvements would be subject to standard planning and permitting review processes.

Temporary property acquisitions would be limited to properties currently zoned for commercial, public facilities, transportation/communications/utilities, office, or industrial uses. Metro is working to avoid acquisitions of residential properties, educational institutions, recreational facilities, health and medical services, cultural institutions, places of worship, and government facilities. Temporary property acquisitions during construction of the alignment and proposed stations would not conflict with applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect, as summarized in Table 3.13-1. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during construction.

TABLE 3.13-1. CONSISTENCY WITH PLANS AND POLICIES

PLANNING JURISDICTION	ADOPTED PLANS	DESCRIPTION OF PLAN	CONSISTENCY WITH PLANS AND POLICES
City of Los Angeles	City of Los Angeles General Plan	The City of Los Angeles General Plan establishes land use designations and policies that help inform planning decisions within the City of Los Angeles. The General Plan has 11 elements, including the land use and mobility elements. The Land Use Element is comprised of 35 Community Plans.	The project is consistent with the City of Los Angeles General Plan's various elements. Relevant elements to this report include the Land Use and Mobility Elements. Conformity to these elements is described in the respective entries below.
City of Los Angeles	City of Los Angeles General Plan - Framework Element	The General Plan Framework Element is intended to guide the city's long-term growth and development based on forecasted population growth through the year 2010. The Framework's transportation policies seek to develop transit alignments and station locations that maximize transit service in activity centers.	The project furthers the Framework's intentions by providing high-capacity transit to high activity centers in Los Angeles, a goal of the Framework Element.
City of Los Angeles	City of Los Angeles General Plan Mobility Plan 2035	The Mobility Plan 2035 is the element of the General Plan that lays the foundation for balancing the need of all road users in a multimodal network. The Mobility Plan identifies the project as a key regional connection that would increase travel options among major destinations, job centers, and intermodal facilities.	The Mobility Plan 2035 explicitly supports the project as outlined in Chapter 3.7, "Regional Transit Connections." The project furthers the plan's goal of "improv[ing] transit access and service to major regional destinations, job centers, and intermodal facilities." Thus, the project is in direct alignment with the Mobility Plan 2035's goal of realizing a new light rail within the region, thereby addressing a critical connection between the current Metro B, D, and E Lines and the regional destinations in between.
City of Los Angeles	City of Los Angeles Municipal Code	The City of Los Angeles Municipal Code (LAMC) provides detailed requirements that implement General Plan policies. Chapter 1 of the LAMC is the Zoning Code, which presents standards for different uses and identifies which uses are allowed in various zoning districts.	The project is in alignment with the LAMC and Zoning Code since the project proposes stations near or at locations that conform or complement the zoning of the respective locations.
City of Los Angeles Community and Neighborhood Plans	Crenshaw Corridor Specific Plan	The Crenshaw Corridor Specific Plan describes standards, compliances, exemptions, and limitations for development while encouraging economic revitalization and special considerations for pedestrian-oriented areas.	The project conforms with the Crenshaw Corridor Specific Plan. In particular, the project supports pedestrian-oriented areas by providing pedestrian-friendly infrastructure near the Metro K Line Expo/Crenshaw and Crenshaw/Adams Stations.

PLANNING JURISDICTION	ADOPTED PLANS	DESCRIPTION OF PLAN	CONSISTENCY WITH PLANS AND POLICES
City of Los Angeles Community and Neighborhood Plans	Exposition Corridor Transit Neighborhood Plan	The Exposition Corridor Transit Neighborhood Plan (TNP) establishes guidelines for future development around each station on the E Line transit corridor. The TNP promotes greater transit ridership along the corridor, as well as reduced automobile reliance and vibrant transit stations.	The project furthers the TNP's goals by creating new transit connections within the transit network, thereby creating higher transit ridership and reduced automobile dependency.
City of Los Angeles Community and Neighborhood Plans	Hollywood Community Plan	Although currently undergoing an update, the Hollywood Community Plan's framework policies encourage compact, mixed-use development in proximity to transit infrastructure and activity centers. It seeks to protect existing residential neighborhoods while enhancing safe, accessible transportation options.	The project does not conflict with the Hollywood Community Plan as the project does not propose removing any existing residential properties and enhances safe transportation options.
City of Los Angeles Community and Neighborhood Plans	Hollywood Redevelopment Plan	The Hollywood Redevelopment Plan sets forth a series of land use and development policies aimed for the redevelopment, rehabilitation, and revitalization within its plan boundaries. Relevant policies to the project encourage a circulation system that will improve the quality of life in Hollywood, which includes improving pedestrian, automobile, parking, and mass transit systems with an emphasis on serving existing facilities and meeting future needs.	The project furthers the Hollywood Redevelopment Plan by furthering its policy that encourages a circulation system that will improve the quality of life in Hollywood, including improvements to pedestrian and mass transit systems to meet future needs.
City of Los Angeles Community and Neighborhood Plans	Hollywood Walk of Fame Master Plan	The Hollywood Walk of Fame Master Plan envisions a "street for everyone" through policies that create an inclusive space with wider sidewalks, additional shade trees, and pedestrian safety enhancements.	The project does not conflict with the Hollywood Walk of Fame Master Plan as the project would provide enhanced pedestrian facilities near transit stations.
City of Los Angeles Community and Neighborhood Plans	Miracle Mile Community Design Overlay	The Miracle Mile Community Design Overlay provides guidance and standards for public and private projects in commercially zoned areas along Miracle Mile with the objective to enhance the identity and promote the pedestrian environment within Miracle Mile.	The project does not conflict with the Miracle Mile Community Design Overlay as the project would provide enhanced pedestrian facilities near transit stations.
City of Los Angeles Community and Neighborhood Plans	Neighborhood Stabilization Overlay District	The City of Los Angeles Neighborhood Stabilization Overlay District applies to areas of Los Angeles that are proximate to colleges and universities. The purpose is to protect and preserve the existing low-density housing stock, to maintain and enhance the quality of life of area residents, to promote well-planned student housing, and to address inadequate parking.	The project would further the Neighborhood Stabilization Overlay District's goals by enhancing pedestrian facilities.

PLANNING JURISDICTION	ADOPTED PLANS	DESCRIPTION OF PLAN	CONSISTENCY WITH PLANS AND POLICES
City of Los Angeles Community and Neighborhood Plans	Park Mile Specific Plan	The Park Mile Specific Plan provides quantitative and qualitative standards for development within plan boundaries. The Park Mile Specific Plan includes ordinances that regulate floor area ratios, use of land and buildings, height and bulk of buildings, architectural and landscape treatment, signage, and vehicular and pedestrian circulation.	The project would not conflict with the Park Mile Specific Plan and would be built in accordance with applicable Park Mile Specific Plan guidelines.
City of Los Angeles Community and Neighborhood Plans	Purple Line Extension Transit Neighborhood Plan	The primary goals of establishing the Purple Line Extension Transit Neighborhood Plan are to create balance while accommodating growth, ensure sustainable patterns of development, provide community benefits, and conserve thriving multi-family neighborhoods. The Plan identifies the D Line corridor as one where people can live and work near transit through transit-oriented communities.	The project furthers the Purple Line Extension Transit Neighborhood Plan by providing enhanced transit opportunities through connections with the D Line.
City of Los Angeles Community and Neighborhood Plans	Plan for a Healthy Los Angeles	The Plan for a Healthy Los Angeles is the Health Element of the City of Los Angeles General Plan and provides a high-level policy vision in addition to measurable objectives and implementation programs to create healthier communities within the city. It provides a roadmap for addressing the most basic and essential quality-of-life issues: safe neighborhoods, a clean environment, access to transit, and the opportunity to thrive.	The project supports the Plan for a Healthy Los Angeles enhancing the health quality of Angelenos through access to safe, reliable, and new transit options.
City of Los Angeles Community and Neighborhood Plans	Tourism District Overlay Zone	The Tourism District Overlay Zone funds programs and initiatives ensuring the cleanliness, safety, beautification, and economic vitality of the district beyond what is provided by the City of Los Angeles.	The project does not conflict with the Tourism District Overlay Zone as the project seeks to provide clean, safe transit with visually pleasing transit stations that promote the overall economic vitality of the region.
City of Los Angeles Community and Neighborhood Plans	Transit Oriented Communities Affordable Housing Incentive Program	The Transit Oriented Communities Affordable Housing Incentive Program and corresponding Guidelines encourage the development of affordable housing for all housing developments within a 0.5-mile radius of a major transit stop.	The project furthers the goals of the Transit Oriented Communities Affordable Housing Incentive Program by creating new opportunities for transit-oriented communities.

PLANNING JURISDICTION	ADOPTED PLANS	DESCRIPTION OF PLAN	CONSISTENCY WITH PLANS AND POLICES
City of Los Angeles Community and Neighborhood Plans	West Adams – Baldwin Hills – Leimert Community Plan	The West Adams – Baldwin Hills – Leimert Community Plan describes policies and programs that advance goals and objectives to maintain the community's individual character while promoting future development. This Community Plan takes into consideration residents and travelers who can alight at one of the five Metro E Line or K Line light rail stations located within the Community Plan Area. It includes new development compatible with the existing and pedestrian-friendly character of the commercial corridors that have replaced "strip" development at key corner sites. The Plan also provides guiding principles for supporting a transit-friendly area through redevelopment.	The project furthers the goals of the West Adams – Baldwin Hills – Leimert Community Plan through enhanced pedestrian-friendly facilities and improved transit connections.
City of Los Angeles Community and Neighborhood Plans	Wilshire Community Plan	The Wilshire Community Plan describes policies and programs that advance goals and objectives to maintain the community's distinctive character. Relevant policies include encouraging higher-density residential uses near major public transportation centers and historic preservation of buildings with architectural merit and/or historic significance.	The project does not conflict with the Wilshire Community Plan as the project promotes higher-density residential use near transit stations and the preservation of buildings of architectural merit and/or historic significance.

PLANNING JURISDICTION	ADOPTED PLANS	DESCRIPTION OF PLAN	CONSISTENCY WITH PLANS AND POLICES
City of West Hollywood	General Plan	The City of West Hollywood General Plan addresses land use and mobility strategies that comply with established city policies and objectives while preserving and enhancing residential neighborhoods, limiting most future development to transit-accessible commercial corridors, and creating a balanced and multimodal transportation system. The Land Use section of the General Plan lists goals and policies that guide the City of West Hollywood's urban form and land use patterns, as well how the buildings and public spaces should be organized within the city. The Land Use section also designates the area around Santa Monica Boulevard and Fairfax Avenue, and Santa Monica Boulevard and La Brea Avenue as transit districts. Transit districts support the following goals and policies: Goal LU-13 support a vibrant, high-density transit-oriented commercial district centered around the intersection of Santa Monica Boulevard and Fairfax Avenue; and Policy LU-13.1 support the location of a transit station near the intersection of Santa Monica Boulevard and Fairfax Avenue.	The project aligns with the City of West Hollywood General Plan's goal of creating transit-accessible commercial corridors through a multimodal transportation system. The project also aids West Hollywood's transit districts goals of having high-density transit-oriented districts and having transit stations at these transit districts. The two transit districts in the project's RSA are the Santa Monica Boulevard and Fairfax Avenue, and Santa Monica Boulevard and La Brea Avenue transit districts. The KNE San Vicente–Fairfax, Fairfax, and La Brea Alignments would provide a transit station at the Santa Monica Boulevard/La Brea Avenue transit district. The KNE San Vicente–Fairfax and Fairfax Alignments would provide a transit station at the Santa Monica Boulevard/Fairfax Avenue transit district.
City of West Hollywood	Climate Action Plan	The Climate Action Plan is a planning document that outlines a course of action to address climate change and reduce greenhouse gas emissions in the city. Specific measures within the land use and community design strategies include developing mixed-used, pedestrian- and transit-oriented development along commercial corridors and in transit overlay zones (TOZs); and explicitly supporting fixed-rail transit to the City of West Hollywood's TOZ areas.	The project aligns with the City of West Hollywood's Climate Action Plan furthering the plan's goal of providing pedestrian- and transit-oriented development along commercial corridors and in TOZs. The project also supports the Climate Action Plan goal of having fixed-rail transit in the City of West Hollywood's TOZ areas.
City of West Hollywood	Design District Streetscape Master Plan	The West Hollywood Design District Streetscape Master Plan is designed to improve the overall aesthetics and mobility of the West Hollywood Design Commercial District. Its goal is to strengthen the district's economic vitality by improving the pedestrian environment, adding bicycle infrastructure, public gathering spaces, and landscaping, while improving the streets' overall aesthetics and functionality.	The project aligns with the Design District Streetscape Master Plan's goal of improving the overall mobility of the City of West Hollywood's Design Commercial District. The project supports the plan's goal of improving existing pedestrian-oriented facilities and the Design District's economic vitality.

PLANNING JURISDICTION	ADOPTED PLANS	DESCRIPTION OF PLAN	CONSISTENCY WITH PLANS AND POLICES
City of West Hollywood	Transit Overlay Zones (TOZ)	TOZs identify sites near major transit stations for which modifications to parking requirements or other development standards may be considered when a project is developing a transportation demand management program. TOZs are intended to encourage mixed-use development in locations with adequate transit service to reduce the need for auto trips. TOZs are concentrated along Santa Monica Boulevard for most of the corridor within the City of West Hollywood boundaries.	The project does not conflict with the City of West Hollywood's Transit Overlay Zone policy. The project's proposed stations are within TOZs, such as the intersections of Santa Monica Boulevard/La Brea Avenue, Santa Monica Boulevard/San Vicente Boulevard, and Santa Monica Boulevard/Fairfax Avenue.
City of West Hollywood	Historic Districts	A "historic district" is a designation given by the City of West Hollywood to a group of buildings, sites, spaces, or structures that are related to each other by historic or architectural significance. Typically, structures are close in proximity and in conjunction contribute to the respective historic district's overall cohesiveness, uniqueness, and architectural integrity. The two Historic Districts within the RSA are the North Harper Avenue Historic District and the Sunset Plaza Historic District.	The project conforms with the City of West Hollywood's Historic Districts policy of preserving buildings of historic and/or architectural significance within Historic Districts within the project's RSA (North Harper Avenue Historic District and Sunset Plaza Historic District).
City of West Hollywood	Sunset Specific Plan	The Sunset Specific Plan defines the vision for Sunset Boulevard in the City of West Hollywood and guides development in the corridor to continue its success as a shopping destination.	The project is in alignment with the City of West Hollywood's Sunset Specific Plan. The project supports the plan's goal of ensuring Sunset Boulevard's continued success as a shopping destination by providing increased access to the area.

Source: Connect Los Angeles Partners 2024
LAMC = City of Los Angeles Municipal Code; RSA = resource study area; TNP = Exposition Corridor Transit Neighborhood Plan; TOZ = transit overlay zone

3.13.7.2.1.2 OPERATIONAL IMPACTS

No Impact. The KNE San Vicente–Fairfax Alignment would traverse portions of the City of Los Angeles and the City of West Hollywood. Operation of the alignment would be consistent with the local land use plans, community/specific plans, and general plans described in Table 3.13-1, which prioritize circulation improvements and transit connections, encourage economic development and improved access along major roadway corridors, and reduce vehicle trips, air pollutant emissions, and greenhouse gas emissions. The KNE San Vicente–Fairfax Alignment and proposed stations would be consistent with Metro's plans and policies, including the 2020 Long Range Transportation Plan, Countywide Sustainability Planning Policy, Active Transportation Strategic Plan, and Complete Streets Policy, that encourage sustainable design of public facilities, expansion of existing transportation options, and increased rail service.

Operation of the alignment and proposed stations directly supports the City of West Hollywood General Plan's Land Use Element. Goal LU-13 supports a high-density transit-oriented commercial district centered around the intersection of Santa Monica Boulevard and Fairfax Avenue, while Policy LU-13.1 supports the location of a transit station near the intersection of Santa Monica Boulevard and Fairfax Avenue. As such, implementation of the KNE San Vicente–Fairfax Alignment and proposed stations would advance this goal and policy by supporting the development of a high-density transit-oriented commercial district centered around the intersection of Santa Monica Boulevard and Fairfax Avenue through the operation of the Fairfax/Santa Monica Station.

Operation of the alignment and proposed stations would be consistent with land use policies and plans adopted by the City of Los Angeles, such as the Mobility Plan 2035, and the three Community Plans (Land Use Elements of the City of Los Angeles General Plan) that fall within the RSA. Mobility Plan 2035 explicitly underscores its goal for the City of Los Angeles to achieve a world-class transit infrastructure and increased access to high-quality transit. It also identifies the project as a key regional connection that would increase travel options among major destinations, job centers, and intermodal facilities. The Hollywood Community Plan, Wilshire Community Plan, and the West Adams – Baldwin Hills – Leimert Community Plan each support transit-rich communities near activity centers. As such, the KNE San Vicente–Fairfax Alignment and proposed stations are consistent with City of Los Angeles plans and policies and would support their goals to enhance public transportation access within their communities.

Operation of the KNE San Vicente–Fairfax Alignment and proposed stations would improve rail service and would provide interconnectivity to the existing and planned Metro system. Mobility would be improved with alternatives to automobile travel and the congested roadway network. In addition to the investment in improved public transit systems associated with the alignment and proposed stations, the creation of a community with high-quality transit access would encourage sustainable neighborhood development principles and pedestrian-friendly communities that would advance more efficient land use patterns, such as transit-oriented communities.

Operation of the alignment and proposed stations would require property acquisition for some operational systems and facilities. The acquisitions would be limited to properties currently zoned for commercial, public facilities, office, transportation/communications/utilities, vacant, or industrial uses.

Metro is working to avoid acquisitions of residential properties, educational institutions, recreational facilities, health and medical services, cultural institutions, places of worship, and government facilities. Operation would be consistent with future commercial, public facilities, and industrial uses, and with the land use characteristics of the transportation corridor. The property acquisitions required for the alignment and proposed stations would not introduce new uses that are incompatible with future and surrounding uses, and would not conflict with applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect.

Operation of the alignment and proposed stations would not conflict with the goals and policies of the applicable jurisdictions along the corridor, nor with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental impact. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during operation.

3.13.7.2.2 KNE FAIRFAX ALIGNMENT

3.13.7.2.2.1 CONSTRUCTION IMPACTS

No Impact. Construction activities for the KNE Fairfax Alignment and proposed stations would be temporary and would not conflict with applicable regional and local land use plans, policies, and regulations identified above and summarized in Table 3.13-1. Construction of the alignment and proposed stations would support the policies of the SCAG 2020-2045 RTP/SCS (SCAG 2020) by providing jurisdictions the opportunity to develop compact communities around the public transit system; by providing an alternative to automobile travel; by providing residents, visitors, and employees within the vicinity of the project another mode of transportation to access regional destinations and employment areas; and by reducing overall air quality emissions and traffic congestion.

The alignment and proposed stations would require property acquisitions and construction easements for some construction activities, including construction staging, installation of systems and facilities, street reconstruction, demolition, and utility relocation and installation work. The temporary construction easements (i.e., the areas needed temporarily during construction in addition to the actual project footprint) would vary along the alignments and proposed stations, depending on the type of construction and adjacent land use. The properties under construction easements would not undergo any zoning classification changes as part of KNE. Properties acquired for construction activities could, upon completion of the construction activities, be available for joint development, which integrates development of transit and non-transit improvements with transit projects physically or functionally related to commercial, residential, or mixed-use development. These improvements would be subject to standard planning and permitting review processes.

Temporary property acquisitions would be limited to properties currently zoned for commercial, public facilities, transportation/communications/utilities, office, or industrial uses. Metro is working to avoid acquisitions of residential properties, educational institutions, recreational facilities, health and medical services, cultural institutions, places of worship, and government facilities. Temporary property acquisitions during construction of the alignment and proposed stations would not conflict with applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect, as summarized in Table 3.13-1. Therefore, the KNE Fairfax Alignment would have no impact during construction.

3.13.7.2.2.2 OPERATIONAL IMPACTS

No Impact. The KNE Fairfax Alignment would traverse portions of the City of Los Angeles and the City of West Hollywood. Operation of the alignment would be consistent with the local land use plans, community/specific plans, and general plans described in Table 3.13-1, which prioritize circulation improvements and transit connections, encourage economic development and improved access along major roadway corridors, and reduce vehicle trips, air pollutant emissions, and greenhouse gas emissions. The KNE Fairfax Alignment and proposed stations would be consistent with Metro's plans and policies, including the 2020 Long Range Transportation Plan, Countywide Sustainability Planning Policy, Active Transportation Strategic Plan, and Complete Streets Policy, that encourage sustainable design of public facilities, expansion of existing transportation options, and increased rail service.

Operation of the alignment and proposed stations directly supports the City of West Hollywood General Plan's Land Use Element. Goal LU-13 supports a high-density transit-oriented commercial district centered around the intersection of Santa Monica Boulevard and Fairfax Avenue, while Policy LU-13.1 supports the location of a transit station near the intersection of Santa Monica Boulevard and Fairfax Avenue. As such, implementation of the KNE Fairfax Alignment and proposed stations would advance this goal and policy by supporting the development of a high-density transit-oriented commercial district centered around the intersection of Santa Monica Boulevard and Fairfax Avenue through the operation of the Fairfax/Santa Monica Station.

Operation of the alignment and proposed stations would be consistent with land use policies and plans adopted by the City of Los Angeles, such as the Mobility Plan 2035, and the three Community Plans (Land Use Elements of the City of Los Angeles General Plan) that fall within the RSA. Mobility Plan 2035 explicitly underscores its goal for the City of Los Angeles to achieve a world-class transit infrastructure and increased access to high-quality transit. It also identifies the project as a key regional connection that would increase travel options among major destinations, job centers, and intermodal facilities. The Hollywood Community Plan, Wilshire Community Plan, and the West Adams – Baldwin Hills – Leimert Community Plan each support transit-rich communities near activity centers. As such, the KNE Fairfax Alignment and proposed stations are consistent with City of Los Angeles plans and policies and would support their goals to enhance public transportation access within their communities.

Operation of the KNE Fairfax Alignment and proposed stations would improve rail service and would provide interconnectivity to the existing and planned Metro system. Mobility would be improved with alternatives to automobile travel and the congested roadway network. In addition to the investment in improved public transit systems associated with the alignment and proposed stations, the creation of a community with high-quality transit access would encourage sustainable neighborhood development principles and pedestrian-friendly communities that would advance more efficient land use patterns, such as transit-oriented communities.

Operation of the alignment and proposed stations would require property acquisition for some operational systems and facilities. The acquisitions would be limited to properties currently zoned for commercial, public facilities, office, transportation/communications/utilities, vacant, or industrial uses. Metro is working to avoid acquisitions of residential properties, educational institutions, recreational

facilities, health and medical services, cultural institutions, places of worship, and government facilities. Operation would be consistent with future commercial, public facilities, and industrial uses, and with the land use characteristics of the transportation corridor. The property acquisitions required for the alignment and proposed stations would not introduce new uses that are incompatible with future and surrounding uses, and would not conflict with applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect.

Operation of the alignment and proposed stations would not conflict with the goals and policies of the applicable jurisdictions along the corridor, nor with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental impact. Therefore, the KNE Fairfax Alignment would have no impact during operation.

3.13.7.2.3 KNE LA BREA ALIGNMENT

3.13.7.2.3.1 CONSTRUCTION IMPACTS

No Impact. Construction activities for the KNE La Brea Alignment and proposed stations would be temporary and would not conflict with applicable regional and local land use plans, policies, and regulations identified above and summarized in Table 3.13-1. Construction of the alignment and proposed stations would support the policies of the SCAG 2020-2045 RTP/SCS (SCAG 2020) by providing jurisdictions the opportunity to develop compact communities around the public transit system; by providing an alternative to automobile travel; by providing residents, visitors, and employees within the vicinity of the project another mode of transportation to access regional destinations and employment areas; and by reducing overall air quality emissions and traffic congestion.

The alignment and proposed stations would require property acquisitions and construction easements for some construction activities, including construction staging, installation of systems and facilities, street reconstruction, demolition, and utility relocation and installation work. The temporary construction easements (i.e., the areas needed temporarily during construction in addition to the actual project footprint) would vary along the alignments and proposed stations, depending on the type of construction and adjacent land use. The properties under construction easements would not undergo any zoning classification changes as part of KNE. Properties acquired for construction activities could, upon completion of the construction activities, be available for joint development, which integrates development of transit and non-transit improvements with transit projects physically or functionally related to commercial, residential, or mixed-use development. These improvements would be subject to standard planning and permitting review processes.

Temporary property acquisitions would be limited to properties currently zoned for commercial, public facilities, transportation/communications/utilities, office, or industrial uses. Metro is working to avoid acquisitions of residential properties, educational institutions, recreational facilities, health and medical services, cultural institutions, places of worship, and government facilities. Temporary property acquisitions during construction of the alignment and proposed stations would not conflict with applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect, as summarized in Table 3.13-1. Therefore, the KNE La Brea Alignment would have no impact during construction.

3.13.7.2.3.2 OPERATIONAL IMPACTS

No Impact. The KNE La Brea Alignment would traverse portions of the City of Los Angeles and the City of West Hollywood. Operation of the alignment would be consistent with the local land use plans, community/specific plans, and general plans described in Table 3.13-1, which prioritize circulation improvements and transit connections, encourage economic development and improved access along major roadway corridors, and reduce vehicle trips, air pollutant emissions, and greenhouse gas emissions. The KNE La Brea Alignment and proposed stations would be consistent with Metro's plans and policies, including the 2020 Long Range Transportation Plan, Countywide Sustainability Planning Policy, Active Transportation Strategic Plan, and Complete Streets Policy, that encourage sustainable design of public facilities, expansion of existing transportation options, and increased rail service.

Operation of the alignment and proposed stations directly supports the City of West Hollywood General Plan's Land Use Element, which designates the area around the La Brea/Santa Monica intersection as a transit district. Transit districts are areas with rich transit access near activity centers. As such, the alignment would advance the Land Use Element through the construction and operation of the La Brea/Santa Monica Station.

Operation of the alignment and proposed stations would be consistent with land use policies and plans adopted by the City of Los Angeles, such as the Mobility Plan 2035, and the three Community Plans (Land Use Elements of the City of Los Angeles General Plan) that fall within the RSA. Mobility Plan 2035 explicitly underscores its goal for the City of Los Angeles to achieve a world-class transit infrastructure and increased access to high-quality transit. It also identifies the project as a key regional connection that would increase travel options among major destinations, job centers, and intermodal facilities. The Hollywood Community Plan, Wilshire Community Plan, and the West Adams – Baldwin Hills – Leimert Community Plan each support transit-rich communities near activity centers. As such, the KNE La Brea Alignment and proposed stations are consistent with City of Los Angeles plans and policies and would support their goals to enhance public transportation access within their communities.

Operation of the KNE La Brea Alignment and proposed stations would improve rail service and would provide interconnectivity to the existing and planned Metro system. Mobility would be improved with alternatives to automobile travel and the congested roadway network. In addition to the investment in improved public transit systems associated with the alignment and proposed stations, the creation of a community with high-quality transit access would encourage sustainable neighborhood development principles and pedestrian-friendly communities that would advance more efficient land use patterns, such as transit-oriented communities.

Operation of the alignment and proposed stations would require property acquisition for some operational systems and facilities. The acquisitions would be limited to properties currently zoned for commercial, public facilities, office, transportation/communications/utilities, vacant, or industrial uses. Metro is working to avoid acquisitions of residential properties, educational institutions, recreational facilities, health and medical services, cultural institutions, places of worship, and government facilities. Operation would be consistent with future commercial, public facilities, and industrial uses, and with the land use characteristics of the transportation corridor. The property acquisitions required for the

alignment and proposed stations would not introduce new uses that are incompatible with future and surrounding uses, and would not conflict with applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect.

Operation of the alignment and proposed stations would improve rail service and would provide interconnectivity to the existing and planned Metro system. The alignment and proposed stations would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, the KNE La Brea Alignment would have no impact during operation.

3.13.7.2.4 HOLLYWOOD BOWL DESIGN OPTION

3.13.7.2.4.1 CONSTRUCTION IMPACTS

No Impact. Construction activities for the Hollywood Bowl Design Option would be temporary and would not conflict with the applicable land use plans, policies, or regulations described above and summarized in Table 3.13-1. Construction of the design option would support the policies of the SCAG 2020-2045 RTP/SCS by providing jurisdictions with opportunities to develop compact communities around the public transit system; by providing an alternative to automobile travel; by providing residents, visitors, and employees within the vicinity of the project another mode of transportation to access regional destinations and employment areas; and by reducing overall air quality emissions and traffic congestion.

The properties under construction easements would not undergo any zoning classification changes as part of KNE. The property acquisitions for construction of the design option would not conflict with applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. Construction of the design option would be conducted in compliance with applicable land use plans, policies, or regulations. Construction of the design option would not conflict with applicable land use plans, policies, or regulations. Therefore, the Hollywood Bowl Design Option would have no impact during construction.

3.13.7.2.4.2 OPERATIONAL IMPACTS

No Impact. Operation of the Hollywood Bowl Design Option would support the policies of the SCAG 2020-2045 RTP/SCS, providing an alternative to automobile travel by providing residents, visitors, and employees within the vicinity of the project another mode of transportation to access regional destinations and employment areas, as well as by reducing overall air quality emissions and traffic congestion. The design option would not require the removal of existing residential properties and would encourage a circulation system that would improve the quality of life in Hollywood through enhancements to pedestrian and mass transit systems to meet future needs, which is consistent with local land use plans, community/specific plans, and general plans in Table 3.13-1. Operation of the design option would not conflict with local land use plans, policies, or regulations. Therefore, the Hollywood Bowl Design Option would have no impact during operation.

3.13.7.2.5 MAINTENANCE AND STORAGE FACILITY

3.13.7.2.5.1 CONSTRUCTION IMPACTS

No Impact. Construction activities for the MSF would be temporary and would not conflict with the applicable plans, policies, or regulations described above and summarized in Table 3.13-1.

The MSF would be aligned with the LAMC and Zoning Code since the MSF would be located on parcels designated for commercial, office, industrial, and transportation/communications/utilities that conform or complement the zoning of the respective locations. The physical MSF site would occupy parcels south of Arbor Vitae Street along the existing K Line ROW and would be located in a highly industrialized and commercial area. The parcels within the MSF RSA in the surrounding vicinity are designated as commercial, office, industrial, education, public facility, and residential (Figure 3.13-17). Given the existing industrial, public facility, and commercial uses in the area, construction of the MSF would not result in a significant change in land use type and would not conflict with adjacent land uses or create any new land use incompatibilities in the surrounding area.

Construction of the MSF would not create any new land uses that could generate conflicts with land uses adjacent to the alignment or conflict with local land use plans, policies, or regulations. Therefore, the MSF would have no impact during construction.

3.13.7.2.5.2 OPERATIONAL IMPACTS

No Impact. Operational activities associated with the MSF would not conflict with applicable plans, policies, or regulations. The MSF would require acquisition of several properties with commercial and industrial uses. Parcels within the MSF RSA are designated industrial, commercial, office, education, public facility, and transportation/communications/utilities land uses. Given the existing industrial and commercial uses of the parcels to be acquired and of the parcels in the surrounding area, operation of the MSF would not result in a change in land use type and would not conflict with adjacent land uses. Operation of the MSF would not create any new land uses that could generate conflicts with land uses adjacent to the alignment or conflict with local land use plans, policies, or regulations. Therefore, the MSF would have no impact during operation.

3.13.7.3 MITIGATION MEASURES

As the impact analysis above demonstrates, construction and operation of any of the KNE alignments and stations, the design option, and the MSF would result in either no impact or a less than significant impact related to land use and planning. Therefore, no mitigation is required under CEQA.

3.13.7.4 SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

Table 3.13-2 summarizes the land use and planning impact significance conclusions and applicable mitigation measures. As indicated above, there are no significant land use and planning impacts that would require mitigation.

TABLE 3.13-2. KNE SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

IMPACT		IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES				
		KNE SAN VICENTE–FAIRFAX ALIGNMENT	KNE FAIRFAX ALIGNMENT	KNE LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MAINTENANCE AND STORAGE FACILITY
Impact LUP-1: Physically divide an established community	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
Impact LUP-2: Conflict with any land use plan, policy, or regulation	Impact Before Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact

Source: Connect Los Angeles Partners 2024
LTS = less than significant impact

3.14 NOISE AND VIBRATION

3.14.1 INTRODUCTION

This discussion provides an evaluation of K Line Northern Extension (KNE) as it relates to noise and vibration. It includes descriptions of the federal, state, and local regulatory setting, existing conditions, and the impacts from construction and operation of the proposed alignments and stations, design option, and maintenance and storage facility (MSF), as well as mitigation measures where applicable. For more detailed information, refer to the KNE Noise and Vibration Technical Report (Appendix 3.14-A).

3.14.2 REGULATORY FRAMEWORK

3.14.2.1 FEDERAL

Federal Transit Administration (FTA) standards and criteria for assessing noise and vibration impacts related to transit projects are used for this analysis since the California Environmental Quality Act (CEQA) does not address modeling methodology for transit noise and vibration impacts. The FTA methodology provided in the FTA Transit Noise and Vibration Impact Assessment Manual (FTA Guidance Manual; FTA 2018) is the proven method to address the effects of noise and vibration on the environment from transit construction and operations, and it is based on community reactions to noise. Section 3.14.3, Methodology, summarizes the FTA Guidance Manual approach applied to this project.

3.14.2.2 STATE

There are no state regulations applicable to the project regarding noise and vibration.

3.14.2.3 REGIONAL

There are no regional regulations applicable to the project regarding noise and vibration.

3.14.2.4 LOCAL

The City of Los Angeles has established policies and regulations concerning the generation and control of noise that could adversely affect its citizens and noise-sensitive land uses. The City of Los Angeles Municipal Code and the City of Los Angeles General Plan Noise Element (1999) are the two documents designed to regulate noise within the city. The LA CEQA Threshold Guide (City of Los Angeles 2006) provides impact thresholds for construction within the city (referred to herein as LA City CEQA thresholds).

The City of West Hollywood's Municipal Code Section 9.08 has established policies and regulations concerning the generation and control of noise that could adversely affect its citizens and noise-sensitive land uses.

Table 3.14-1 summarizes the relevant City of Los Angeles and City of West Hollywood ordinances.

TABLE 3.14-1. NOISE AND VIBRATION CODES, GOALS, OBJECTIVES, AND POLICIES

CODE/GOAL/OBJECTIVE/ POLICY	DESCRIPTION
CITY OF LOS ANGELES MUNICIPAL CODE	
Section 41.40	Engaging in construction, repair, or excavation work with any construction-type device or job-site delivering of construction materials without a Police Commission approved variance would constitute a violation: • Between the hours of 9:00 p.m. and 7:00 a.m. of the following day. • In any residential zone, or within 500 feet of land so occupied, before 8:00 a.m. or after 6:00 p.m. on any Saturday, or at any time on any Sunday. In a manner as to disturb the peace and quiet of neighboring residents or any reasonable person of normal sensitiveness residing in the area.
Section 41.40(j)	Noise standards do not apply to major public works construction by the City of Los Angeles and its proprietary departments, including all structures and operations necessary to regulate or direct traffic due to construction activities. The Board of Police Commissioners will grant a variance for this work and construction activities will be subject to all conditions of the variance as granted.
Section 91.1207.14.2	Interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room.
Section 112.05	Any powered equipment or hand tool that produces a maximum noise level exceeding 75 dBA at a distance of 50 feet when operated within 500 feet of a residential zone is prohibited. This noise limitation does not apply where compliance is technically infeasible.
CITY OF LOS ANGELES GENERAL PLAN NOISE ELEMENT	
P11	For a proposed development project that is deemed to have a potentially significant noise impact on noise-sensitive uses require mitigation measures, as appropriate, in accordance with CEQA and city procedures.
P12	Discretionary permits for a proposed noise-sensitive use or a subdivision of four or more detached single-family units and which use is determined to be potentially significantly impacted by existing or proposed noise sources, require mitigation measures, as appropriate, in accordance with procedures set forth in the CEQA to achieve an interior noise level of a CNEL of 45 dB or less.
CITY OF LOS ANGELES CEQA THRESHOLD GUIDELINES	
I.2	A project would normally have a significant impact on noise levels from construction if: • Construction activities lasting more than one day would exceed existing ambient exterior noise levels by 10 dBA or more at a noise-sensitive use; • Construction activities lasting more than 10 days in a three-month period would exceed existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive use; or • Construction activities would exceed the ambient noise level by 5 dBA at a noise-sensitive use between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday.

CODE/GOAL/OBJECTIVE/ POLICY	DESCRIPTION
CITY OF WEST HOLLYWOOD MUNICIPAL CODE	
Section 9.08.050(d 1)	States construction between the hours of 7:00 p.m. and 8:00 a.m. on weekdays; or at any time on Saturday (except, between the hours of 8:00 a.m. and 7:00 p.m., interior construction is permissible); or at any time on Sunday or certain holidays.
Section 9.08.050(d 2)	To minimize the disturbance to surrounding community, the motors and engines for construction-related vehicles and equipment shall not be left idling and shall be turned off when not in use.
Section 9.08.0560(d)	The provisions of Section 9.08.050 do not apply to any person who performs construction, repair, earthmoving work, excavation, or commercial tree trimming and removal services if and to the extent that the City Manager has given prior written permission.

Source: City of Los Angeles Municipal Code; City of Los Angeles 1999, 2006; City of West Hollywood Municipal Code 2023
CEQA = California Environmental Quality Act; CNEL = community noise equivalent level; dB = decibels; dBA = A-weighted decibels; Ldn = day-night noise level

3.14.3 METHODOLOGY

3.14.3.1 CEQA METHODOLOGY

The purpose of this assessment is to evaluate the project against CEQA thresholds of significance as the basis for determining the level of impacts related to noise and vibration. The analysis uses the FTA Guidance Manual (FTA 2018) for assessing noise and vibration associated with construction and operation of transit projects. Impacts are analyzed in accordance with CEQA guidelines using the FTA noise and vibration impact criteria to identify significant increases in noise and vibration levels, as summarized below.

3.14.3.1.1 NOISE

FTA standards and criteria for assessing noise impacts related to construction and operation of transit projects are based on community reactions to noise. The criteria reflect changes in noise exposure using a sliding scale where the higher the level of existing noise, the smaller the increase in total noise exposure that is allowed. FTA noise impact criteria group sensitive land uses into three categories, as described in Table 3.14-2. Most commercial or industrial uses are not considered noise-sensitive because activities within these types of buildings are generally compatible with higher noise levels. Businesses can be considered noise-sensitive if low noise levels are an important part of their operations; such businesses include sound and motion picture recording studios. Most parks used primarily for active recreation, such as sports complexes and bike or running paths, are not considered noise-sensitive. However, some parks (even some in dense urban areas) are primarily used for passive recreation, such as reading, conversation, or meditation. These places, which may be valued as havens from the noise and rapid pace of everyday city life, are treated as noise-sensitive and are included in Land Use Category 3 below. Non-sensitive uses do not require noise impact assessment.

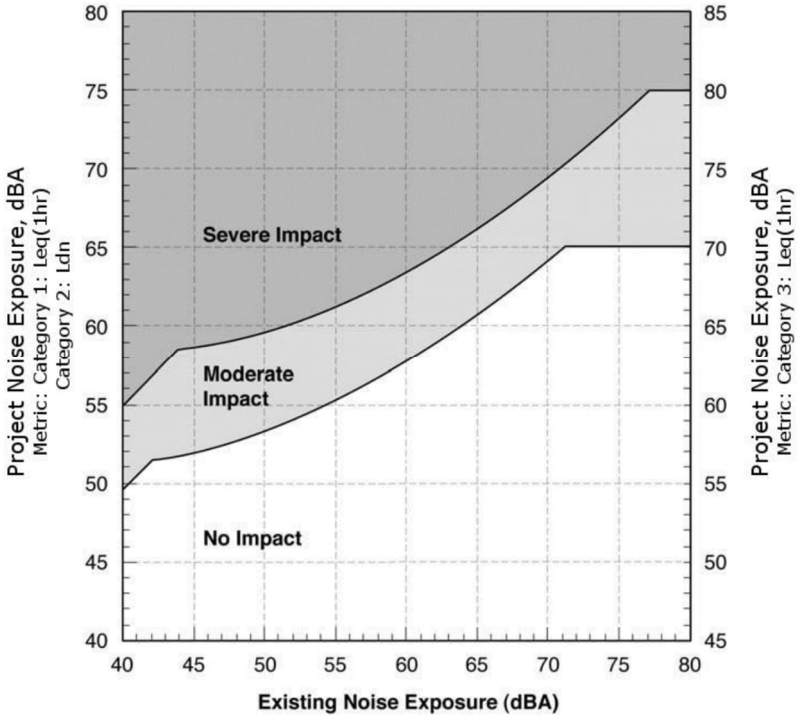
TABLE 3.14-2. LAND USE CATEGORIES AND METRICS FOR TRANSIT NOISE IMPACT CRITERIA

LAND USE CATEGORY	LAND USE TYPE	NOISE METRIC (dBA)	DESCRIPTION OF LAND USE CATEGORY
1	High Sensitivity	Outdoor L_{eq} (1hr)[1]	Land where quiet is an essential element of its intended purpose. Example land uses include preserved land for serenity and quiet, outdoor amphitheaters and concert pavilions, and national historic landmarks with considerable outdoor use. Recording studios and concert halls are also included in this category.
2	Residential	Outdoor L_{dn}	This category is applicable to all residential land use and to buildings where people normally sleep, such as hotels and hospitals.
3	Institutional	Outdoor L_{eq} (1hr)[1]	This category is applicable to institutional land uses with primarily daytime and evening use. Example land uses include schools, libraries, theaters, and churches where it is important to avoid interference with such activities as speech, meditation, and concentration on reading material. Places for meditation or study associated with cemeteries, monuments, museums, campgrounds, and recreational facilities are also included in this category.

Source: FTA 2018
[1] L_{eq} (1hr) for the loudest hour of project-related activity during hours of noise sensitivity.
dBA = A-weighted decibels; L_{dn} = day-night noise level; L_{eq} = equivalent noise level

The FTA has defined three levels of impacts for sensitive uses affected by transit projects: no impact, moderate impact, and severe impact. Each impact level is illustrated in Figure 3.14-1 and described in Table 3.14-3.

FIGURE 3.14-1. NOISE IMPACT CRITERIA FOR TRANSIT PROJECTS



Source: FTA 2018

TABLE 3.14-3. LEVELS OF IMPACT

LEVEL OF IMPACT	DESCRIPTION
No Impact	Project-generated noise is not likely to cause community annoyance. Noise projections in this range are considered acceptable by FTA and mitigation is not required.
Moderate Impact	Project-generated noise in this range is considered to cause impact at the threshold of measurable annoyance. Moderate impacts serve as an alert to project planners for potential adverse impacts and complaints from the community. Mitigation should be considered at this level of impact based on project specifics and details concerning the affected properties.
Severe Impact	Project-generated noise in this range is likely to cause a high level of community annoyance. The project sponsor should first evaluate alternative locations/alignments to determine whether it is feasible to avoid severe impacts altogether. In densely populated urban areas, evaluation of alternative locations may reveal a trade-off of affected groups, particularly for surface rail alignments. Projects that are characterized as point sources rather than line sources often present greater opportunity for selecting alternative sites. This guidance manual and FTA's environmental impact regulations both encourage project sites that are compatible with surrounding development when possible. If it is not practical to avoid severe impacts by changing the location of the project, mitigation measures must be considered.

Source: FTA 2018

The FTA has identified special cases for moderate and severe impact categories:

- Moderate: In this range, other project-specific factors must be considered to determine the magnitude of the impact and the need for mitigation. These other factors may include the predicted increase over existing noise levels, the type and number of noise-sensitive land uses affected, existing outdoor-indoor sound insulation and the cost effectiveness of mitigating noise to more acceptable levels.
- Severe: Noise mitigation will be specified for severe impact areas unless there is no practical method of mitigating the noise.

For CEQA purposes, a severe impact under FTA guidelines is considered a significant impact for noise levels in this analysis. Mitigation measures will be identified for significant impacts under CEQA.

3.14.3.1.1.1 CONSTRUCTION NOISE

Construction noise was modeled using noise levels from the FTA Guidance Manual and the Federal Highway Administration (FHWA) Roadway Construction Noise Model version 1.1. For transit projects, FTA's construction noise assessment criteria are based upon a 1-hour equivalent noise level (L_{eq}). For residential uses, the threshold is 90 A-weighted decibels (dBA) for daytime construction and 80 dBA for nighttime construction. Commercial and industrial uses are held to a 100-dBA daytime and nighttime noise construction threshold. For the purposes of this analysis, the FTA general assessment construction noise limit criteria of 1-hour L_{eq} have been applied. While the FTA criteria were used for this general assessment, the 80-dBA nighttime threshold will likely not be used because Metro would defer to the noise ordinances of local jurisdictions.

The three types of construction that would occur are at-grade construction and tunnel construction, including cut-and-cover and sequential excavation method construction. Construction of the

aboveground elements of the guideways and MSF would use equipment such as heavy-earth moving equipment, generators, cranes, and pneumatic tools. Construction activity at station areas would be cut-and-cover. Construction noise levels at the staging areas would be less than the noise levels generated by at-grade construction and would primarily involve the movement of equipment.

The impact analysis described in Section 3.14.7 utilizes the FTA Guidance Manual for the general assessment construction noise criteria with transit projects. However, during construction, Metro would defer to local noise ordinances, where local noise ordinances exist (see Table 3.14-1). The FTA guidelines are considered reasonable criteria for impact assessment. If these criteria are exceeded, there may be adverse community reaction. Table 3.14-4 shows these noise criteria by land use. While the FTA criteria were used for this general assessment, the 80 dBA nighttime threshold will likely not be used in later stages of design because Metro would defer to noise ordinances of local jurisdictions.

TABLE 3.14-4. GENERAL ASSESSMENT OUTDOOR CONSTRUCTION NOISE CRITERIA

LAND USE	$L_{EQ,EQUIP(1HR)}$, dBA	
	DAY	NIGHT
Residential	90	80
Commercial	100	100
Industrial	100	100

Source: FTA 2018
dBA = A-weighted decibels; L_{eq} = hourly equivalent noise level

The FTA Guidance Manual includes noise levels for common pieces of construction equipment. For equipment not listed in the FTA Guidance Manual, noise levels from the FHWA Roadway Construction Noise Model were used. Construction noise levels were assessed as they would typically occur during at-grade, tunnel, and cut-and-cover construction. The two loudest pieces of construction equipment used for each of these construction types were combined, and this noise level was used to assess construction noise against the FTA construction 1-hour L_{eq} noise criteria.

The City of Los Angeles has established quantitative standards for construction noise, as shown in Table 3.14-5. The City of West Hollywood has set construction hours between 8 a.m. and 7 p.m.; during these times, construction is exempt from local noise standards. As noted above, for the purposes of this analysis, the FTA general assessment construction noise limit criteria of 1-hour L_{eq} have been applied.

TABLE 3.14-5. CONSTRUCTION STANDARDS BY JURISDICTION

JURISDICTION	PERMISSIBLE CONSTRUCTION TIME	QUANTITATIVE CONSTRUCTION NOISE STANDARD
City of Los Angeles	7:00 a.m. to 9:00 p.m. Monday through Friday 8:00 a.m. to 6:00 p.m. Saturdays	75 dBA at 50 feet within 500 feet of a residential zone
City of West Hollywood	8:00 a.m. to 7:00 p.m. Monday through Saturday	None Stated

Sources: City of Los Angeles *Municipal Code*; City of Los Angeles 1999; City of West Hollywood Municipal Code 2023

3.14.3.1.1.2 OPERATIONAL NOISE

An analysis of operational noise levels at sensitive land uses was completed using the FTA Detailed Noise Analysis procedure as found in Section 4.5 of the FTA Guidance Manual.

The project would be primarily underground, with the exception of the MSF and the entrances and exits to the stations. The following sections provide methodological considerations about surface project components.

STATION NOISE

Aboveground noise-generating activities include entrance and egress from the stations (through stairways, escalators, and elevators), as well as an increase in the number of people around the station. The openings for the escalators and for the ventilation shafts can act as noise sources for the subway. Emergency egress locations would be closed during normal operations and would not be a source of noise. Noise related to underground operational activities at the stations, as with noise in the tunnels, would not reach the surface and was therefore not included in the noise analysis.

MAINTENANCE AND STORAGE FACILITY NOISE

Aboveground noise sources within the MSF would include the following:

- Train movement on tracks: Train movements at the MSF would generate noise from steel wheels rolling on steel rails. Trains would travel at low speeds within the MSF site (an average speed of 10 miles per hour within the yard and five miles per hour along curves).
- Crossovers: Turnouts and crossovers require that two rails cross. The wheels striking the ends of the gap increases noise and vibration levels near special trackwork by approximately 5 dBA.
- Wheel squeal: The MSF would include tight curves that may generate wheel squeal that would add 10 dBA.
- Maintenance shops: A reference noise level for the maintenance shops was obtained from the Metro E Line Phase 2 Final Environmental Impact Report (Metro 2022) and from noise measurements at the Metro C Line Maintenance Yard. The reference noise level was 62 dBA L_{eq} at 30 feet for a period of 30 minutes. The noise level from the maintenance shops is assumed to be continuous.
- Car wash: A reference sound exposure level of 85 dBA (maximum noise levels of 64 dBA) at 20 feet was used based on measurements taken for other recent Metro studies, such as the Metro E Line Phase 2 Project (Metro 2022).
- Vehicular traffic: To increase the traffic noise levels along a roadway by 3 dBA, the amount of traffic would need to double. Employee trips to and from the MSF would constitute a small portion of the overall traffic along the roadway network and would not double traffic volumes along any roadway. Therefore, employee trips would not result in a substantial permanent increase in noise levels near the MSF and employee trips were not further assessed in this analysis.

- Traction power substations: Reduction of noise from traction power substations would be provided by barriers, enclosures, sound-absorptive materials, and engine silencers as applicable. Operation of the generators would not be a part of regular operation and would only be used during emergency situations and during weekly testing for approximately 20 minutes. Noise from generators would be reduced by barriers, enclosures, sound-absorptive materials, and engine silencers as applicable. Therefore, generator operation has not been included as part of the operational analysis.

Noise levels from MSF noise sources were combined to assess impacts at receivers.

3.14.3.1.2 VIBRATION

FTA has developed impact criteria for acceptable levels of ground-borne vibration (GBV) and ground-borne noise (GBN). GBV is the movement of the ground caused by an energy source, such as construction activities or light rail vehicle movement; GBN is the noise that can occur inside a building, caused by the effect of GBV on the structure of the building. These criteria, as summarized in Table 3.14-6, are presented in terms of acceptable indoor GBN and GBV levels. Impacts will occur if these levels are exceeded. Criteria for GBV are expressed in terms of root mean square velocity levels in vibration decibels (VdB), and criteria for GBN are expressed in terms of A-weighted sound pressure levels in dBA.

TABLE 3.14-6. GBV AND GBN IMPACT CRITERIA FOR GENERAL ASSESSMENT

LAND USE CATEGORY	GBV IMPACT LEVELS (VdB, 1 MICRO-INCH/SEC) – FREQUENT EVENTS	GBN IMPACT LEVELS (dBA, 20 MICRO PASCALS) – FREQUENT EVENTS
Category 1: Buildings where vibration would interfere with interior operations[1]	65	N/A
Category 2: Residences and buildings where people normally sleep	72	35
Category 3: Institutional land uses with primarily daytime use	75	40

Source: FTA 2018
[1] This criterion limit is based on levels that are acceptable for most moderately sensitive equipment, such as optical microscopes.
Note: Since the project would have more than 70 light rail vehicle pass-bys per day, the FTA criteria for frequent events is used to assess potential impacts.
dBA = A-weighted decibels; GBN = ground-borne noise; GBV = ground-borne vibration; N/A = not applicable; VdB = vibration decibels

The criteria for special buildings such as concert halls, television and recording studios, auditoriums, and theaters, which are also sensitive to vibration but do not fit into the three FTA sensitive land use categories previously described, are presented in Table 3.14-7. For this project, the Hollywood Bowl, Lee Strasberg Theatre, and others are included in this special building category. The Academy Museum is classified as a Category 3 institutional land use due to its usage as a movie theater. Medical buildings may have equipment sensitive to vibration and may need to be evaluated if there is a possibility of a vibration impact at the building.

Findings of a severe impact according to FTA criteria is considered a significant impact for the purposes of this CEQA analysis. Mitigation measures will be identified for severe impacts. Table 3.14-7 also considers the frequency of vibration events.

TABLE 3.14-7. GBV AND GBN IMPACT CRITERIA FOR SPECIAL BUILDINGS

TYPE OF BUILDING OR ROOM	GBV IMPACT LEVELS (VdB, 1 MICRO-INCH/SEC) – FREQUENT EVENTS	GBN IMPACT LEVELS (dBA, 20 MICRO PASCALS) – FREQUENT EVENTS
Concert Halls	65	25
TV Studios	65	25
Recording Studios	65	25
Auditoriums	72	30
Theaters	72	35

Source: FTA 2018
Note: Since the project would have more than 70 light rail vehicle pass-bys per day, the FTA criteria for frequent events is used to assess potential impacts.
dBA = A-weighted decibels; GBN = ground-borne noise; GBV = ground-borne vibration; VdB= vibration decibels

3.14.3.1.2.1 CONSTRUCTION VIBRATION

Construction vibration was modeled using vibration levels from the FTA Guidance Manual, which includes vibration levels for common pieces of construction equipment. To evaluate potential annoyance or interference with vibration-sensitive activities caused by construction vibration, the criteria for general assessment shown in Table 3.14-6 above can be applied. In most cases, the primary concern regarding construction vibration relates to potential damage effects. Using the values in Table 3.14-8, a general assessment of the distance of the damage risk for different types of buildings was calculated.

TABLE 3.14-8. CONSTRUCTION VIBRATION

EQUIPMENT	PPV AT 25 FEET (INCH/SECOND)	APPROXIMATE L_V AT 25 FEET
Clam shovel drop (slurry wall)	0.202	94
Hydromill (slurry wall) in soil	0.0008	66
Hydromill (slurry wall) in rock	0.017	75
Vibratory roller	0.21	94
Hoe ram	0.089	87
Large bulldozer	0.089	87
Caisson drilling	0.089	87
Load trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

Source: FTA 2018
PPV = peak particle velocity; L_v = velocity level

3.14.3.1.2.2 OPERATIONAL VIBRATION

An analysis of operational GBV levels at sensitive receivers was completed using the FTA Detailed Vibration Analysis procedure, as outlined below:

- Receivers of Interest: Identify clusters of sensitive receivers and select closest receiver to underground project alignment and at-grade maintenance and ancillary facilities.
- Vibration Impact Assessment: Assess the GBV impact at each receiver of interest using the impact criteria defined in Table 3.14-6 and Table 3.14-7.
- Mitigation of Vibration Impact: Where the assessment shows an exceedance of the FTA vibration impact thresholds, evaluate mitigation measures and/or design modifications to the track design. Then loop back to modify the project vibration computations, thereby accounting for the adopted mitigation, and reassess the remaining vibration impact.

Since the alignments and the design option are primarily underground, the potential impacts from train operations would be related to GBV and GBN. The modeling of GBV and GBN was conducted in accordance with the FTA Detailed Vibration Analysis procedure. GBN from operation of the alignments and stations was modeled because the alignments would be below ground; GBN from MSF operations was not modeled because it would not be underground. Vibration from a passing train in a tunnel has a relatively small potential to move through the geologic strata and result in building vibration from energy transferred through a building's foundation. Vibration levels that would be high enough to cause any building damage, even minor cosmetic damage, are extremely unlikely.

GBV is analyzed because of its potential to create an annoyance, or to cause issues for sensitive equipment, such as a magnetic resonance imaging scanners, as well as its potential to damage buildings:

- Human Annoyance from Vibration: Potential human annoyance from vibration is assessed using root mean square (RMS) vibration velocity. GBV from transit vehicles is characterized using RMS vibration velocity amplitude expressed as VdB. The vibration perception threshold for most humans is approximately an RMS vibration level of 65 to 70 VdB. Levels from 70 to 75 VdB are typically noticeable but acceptable to most persons. Levels higher than 80 VdB are often considered unacceptable.
- Sensitive Equipment Issues with Vibration: Potential issues with sensitive equipment from vibration is assessed using RMS vibration velocity. GBV from transit vehicles is characterized using RMS vibration velocity amplitude expressed as VdB. The vibration perception threshold for buildings where vibration would interfere with interior operations and potentially with equipment is an RMS vibration level of 65 VdB for screening level or the specific criteria of the equipment manufacturer.

In contrast, GBN is a low-frequency rumble related to GBV that excites a building's floors and walls. A deep subway produces no appreciable airborne noise above the ground surface. The GBN is considered to be related to operational vibration, and the GBN may be slightly audible within a building that otherwise has low internal background noise. Because GBN is directly related to GBV, the level of GBN is a function of the distance from the tracks to the building. To calculate the GBN, the GBV is first calculated, and then the potential for exciting GBN is determined. Both the FTA GBV and GBN impact criteria are

shown in Table 3.14-6. The GBN and GBV analysis uses vibration impact thresholds defined in the FTA Guidance Manual. Residences are considered FTA Category 2 receivers in the FTA guidance. The thresholds for Category 2 receivers are 72 VdB for GBV and 35 dBA for GBN.

3.14.3.2 SIGNIFICANCE THRESHOLDS

In accordance with Appendix G of the 2022 CEQA Guidelines, the project would have a significant impact related to noise and vibration if it would:

- Impact NOI-1: Result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinances, or applicable standards of other agencies.
- Impact NOI-2: Result in generation of excessive GBV or GBN levels.
- Impact NOI-3: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

3.14.4 RESOURCE STUDY AREA

3.14.4.1 NOISE

The resource study area (RSA) for noise impacts is defined as a radius of 200 feet from all alignments and stations, the design option, and the MSF. A radius of 200 feet was chosen because it is the FTA limit for noise screening for this type of project within an urban environment. Due to buildings in the area, the noise sources would not have an effect over 200 feet away.

3.14.4.2 VIBRATION

The RSA for vibration impacts is defined as a radius of 100 feet from each alignment and stations, the design option, and the MSF. A screening distance of 100 feet horizontal from the center line of the alignment at the surface was used to further identify land uses that could have issues with vibration. These land uses were then screened to only include areas where the depth to the rail tunnel is 110 feet or less. This value takes into consideration a buffer of 10 feet to account for any uncertainty in potential vibration transmission through the ground.

3.14.5 EXISTING SETTING

This existing setting discussion summarizes current conditions related to noise and vibration within the KNE RSA.

3.14.5.1 NOISE

3.14.5.1.1 REGIONAL SETTING

KNE is located in the Cities of Los Angeles and West Hollywood in Los Angeles County. The existing noise environment is primarily an urban area that typically has day-night noise levels (L_{dn}) between 65 and 71 L_{dn} dBA. KNE would be in a below-ground transit alignment that would operate in underground tunnels. GBN from construction and operations would transmit as GBV through the ground to the buildings above and adjacent to the tunnel alignment. At-grade facilities such as station entrances and ventilation structures, are a potential source of noise.

The exterior noise environment within an urban area is generally dominated by traffic noise and occasional aircraft flyovers that are contributors to the existing noise environment. Land uses found around the station locations include public facilities, public and commercial office buildings, various types of commercial uses, institutional uses, multifamily residential uses (including adaptive reuse of older non-residential buildings), industrial uses, surface parking facilities, and parking structures.

3.14.5.1.1.1 ALIGNMENTS AND STATIONS

Land uses were evaluated within a screening distance of 200 feet from each station for all three alignments. Table 3.14-9 through Table 3.14-11 show the stations for each alignment with noise-sensitive land uses within the RSA. For the KNE San Vicente–Fairfax Alignment there are ten noise-sensitive parcels; for the KNE Fairfax Alignment there are seven noise-sensitive parcels; and for the KNE La Brea Alignment there are 15 noise-sensitive parcels within each RSA. Figure 3.14-2 shows the locations of the noise measurement locations and noise-sensitive land uses identified in the RSA.

FIGURE 3.14-2. NOISE MEASUREMENT AND NOISE-SENSITIVE LAND USES WITHIN KNE RESOURCE STUDY AREA

Source: Connect Los Angeles Partners 2024

KNE SAN VICENTE–FAIRFAX ALIGNMENT

Ten noise-sensitive parcels are located within the station RSAs along the KNE San Vicente–Fairfax Alignment. Table 3.14-9 identifies these noise-sensitive land uses.

TABLE 3.14-9. NOISE-SENSITIVE LAND USES WITHIN KNE SAN VICENTE–FAIRFAX ALIGNMENT STATION RESOURCE STUDY AREAS

STATION (NOISE MEASUREMENT LOCATION)	NOISE-SENSITIVE LAND USE	# OF PARCELS	# OF RESIDENTIAL UNITS	EXISTING L_{dn} dBA AND PEAK HOUR L_{eq} dBA LEVELS AT NOISE-SENSITIVE LAND USES[1]
Expo/Crenshaw	None	None	0	N/A
Crenshaw/Adams (LT1, ST1)	Residential – SFR	2 – SFR	2	L_{dn} 67 dBA/peak hour L_{eq} 65 dBA at 3 p.m. – 2614 S Victoria Ave
Midtown Crossing (LT2)	Residential – MFR (Apartment Building)	1 – MFR	20	L_{dn} 62 dBA/peak hour L_{eq} 73 dBA at 3 p.m. – 4729 San Vicente Blvd
Wilshire/Fairfax (LT6)	Residential – MFR (Apartment Building) Academy Museum of Motion Pictures	1 – MFR 1 – Mixed-Use Building 1 – Museum	24	L_{dn} 61 dBA/peak hour L_{eq} 68 dBA at 10 a.m. – 6122 Orange St/Academy Museum of Motion Pictures
Fairfax/3rd	None	None	0	N/A
La Cienega/Beverly (LT7)	Residential – MFR (Apartment Building)	1 – Duplex	2	L_{dn} 63 dBA/peak hour L_{eq} 64 dBA at 8 a.m. – 321 N Alfred St
San Vicente/Santa Monica (LT8)	Residential – MFR (Apartment Building)	2 – Apartment Complexes	42	L_{dn} 63 dBA/peak hour L_{eq} 65 dBA at 5 p.m. – 840 Larrabee St
Fairfax/Santa Monica	None	None	0	N/A
La Brea/Santa Monica (LT5)	Residential – The Dylan Apartments	1 – Apartment Complex	70	L_{dn} 74 dBA/peak hour L_{eq} 73 dBA at 12 a.m. – 7100 Santa Monica Blvd
Hollywood/Highland	None	None	0	N/A

Source: Connect Los Angeles Partners 2024
[1] L_{dn} dBA applies to FTA Category 2 residential receivers and peak hour L_{eq} dBA applies to Category 3 institutional receivers.
dBA = A-weighted decibels; L_{eq} = equivalent noise level; L_{dn} = day-night noise level; N/A = not applicable; RSA = resource study area; SFR = single-family residence; MFR = multifamily residence

In addition, a staging area to support construction activities at the Fairfax/3rd Station would be located approximately 50 feet from the northern property line of Hancock Park Elementary School (408 S Fairfax Avenue), where there is an estimated existing L_{dn} of 62 dBA and a peak hour L_{eq} 28 dBA at 3 p.m. Hancock Park Elementary School would be more than 250 feet from proposed at-grade, cut-and-cover, and tunnel construction activities.

KNE FAIRFAX ALIGNMENT

Seven noise-sensitive parcels are located within the station RSAs along the KNE Fairfax Alignment. Table 3.14-10 identifies these noise-sensitive land uses.

TABLE 3.14-10. NOISE-SENSITIVE LAND USES WITHIN KNE FAIRFAX ALIGNMENT STATION RESOURCE STUDY AREAS

STATION (NOISE MEASUREMENT LOCATION)	NOISE-SENSITIVE LAND USE	# OF PARCELS	# OF RESIDENTIAL UNITS	EXISTING L_{dn} dBA AND PEAK HOUR L_{eq} dBA LEVELS AT NOISE-SENSITIVE LAND USES[1]
Expo/Crenshaw	None	None	0	N/A
Crenshaw/Adams (LT1, ST1)	Residential – SFR	2 – SFR	2	L_{dn} 67 dBA/peak hour L_{eq} 65 dBA at 3 p.m. – 2614 S Victoria Ave
Midtown Crossing (LT2)	Residential – MFR (Apartment Building)	1 – MFR	20	L_{dn} 62 dBA/peak hour L_{eq} 73 dBA at 3 p.m. – 4729 San Vicente Blvd
Wilshire/Fairfax (LT6)	Residential – MFR Academy Museum of Motion Pictures	1 – MFR 1 – Mixed-Use Building 1 – Museum	24	L_{dn} 61 dBA/peak hour L_{eq} 68 dBA at 10 a.m. – 6122 Orange St/ Museum
Fairfax/3rd	None	None	0	N/A
Fairfax/Santa Monica	None	None	0	N/A
La Brea/Santa Monica (LT5)	Residential – MFR (The Dylan Apartments)	1 – MFR	70	L_{dn} 74 dBA/peak hour L_{eq} 73 dBA at 12 a.m. – 7100 Santa Monica Blvd
Hollywood/Highland	None	None	0	N/A

Source: Connect Los Angeles Partners 2024
[1] L_{dn} dBA applies to FTA Category 2 residential receivers and peak hour L_{eq} dBA applies to Category 3 institutional receivers.
dBA = A-weighted decibels; L_{eq} = equivalent noise level; L_{dn} = day-night noise level; N/A = not applicable; RSA = resource study area; SFR = single-family residence; MFR = multifamily residence

In addition, a staging area to support construction activities at the Fairfax/3rd Station would be located approximately 50 feet from the northern property line of Hancock Park Elementary School (408 S Fairfax Avenue), where there is an estimated existing L_{dn} of 62 dBA and a peak hour L_{eq} of 28 dBA at 3 p.m. Hancock Park Elementary School would be more than 250 feet from proposed at-grade, cut-and-cover, and tunnel construction activities.

KNE LA BREA ALIGNMENT

Fifteen noise-sensitive parcels are located within the station RSAs along the KNE La Brea Alignment. Table 3.14-11 identifies these noise-sensitive land uses.

TABLE 3.14-11. NOISE-SENSITIVE LAND USES WITHIN KNE LA BREA ALIGNMENT STATION RESOURCE STUDY AREAS

STATION (NOISE MEASUREMENT LOCATION)	NOISE-SENSITIVE LAND USE	# OF PARCELS	# OF RESIDENTIAL UNITS	EXISTING L_{dn} dBA AND PEAK HOUR L_{eq} dBA LEVELS AT NOISE-SENSITIVE LAND USES[1]
Expo/Crenshaw	None	None	0	N/A
Crenshaw/Adams (LT1, ST1)	Residential – SFR	2 – SFR	2	L_{dn} 67 dBA/peak hour L_{eq} 65 dBA at 3 p.m. – 2614 S Victoria Ave
Midtown Crossing (LT2)	Residential – Apartments	1 – Apartment Complex	20	L_{dn} 62 dBA/peak hour L_{eq} 73 dBA at 3 p.m. – 4729 San Vicente Blvd
Wilshire/La Brea (LT3, ST2)	Residential – SFR and Apartments	3 – SFR 3 – Apartment Complexes	64	L_{dn} 71 dBA/peak hour L_{eq} 71 dBA at 12 a.m. – 618 S Detroit St
La Brea/Beverly (LT4, ST3)	Residential – SFR and Apartments	4 – SFR 1 – Apartment Complex	6	L_{dn} 68 dBA/peak hour L_{eq} 69 dBA at 2 p.m. – 317 N Detroit St
La Brea/Santa Monica (LT5)	Residential – The Dylan Apartments	1 – Apartment Complex	70	L_{dn} 74 dBA/peak hour L_{eq} 73 dBA at 12 a.m. – 7100 Santa Monica Blvd
Hollywood/Highland	None	None	0	N/A

Source: Connect Los Angeles Partners 2024
[1] L_{dn} dBA applies to FTA Category 2 residential receivers and peak hour L_{eq} dBA applies to Category 3 institutional receivers.
dBA = A-weighted decibels; L_{eq} = equivalent noise level; L_{dn} = day-night noise level; N/A = not applicable; RSA = resource study area; SFR = single-family residence

3.14.5.1.1.2 HOLLYWOOD BOWL DESIGN OPTION

The Hollywood Bowl Design Option would be located primarily underground, with the aboveground station entrance at the Hollywood Bowl. This station would be located under an existing parking lot. The performance area for the Hollywood Bowl is more than 200 feet from any station activity and is shielded by buildings and natural terrain. There are no noise-sensitive parcels or land uses within the RSA for the Hollywood Bowl Station.

3.14.5.1.1.3 MAINTENANCE AND STORAGE FACILITY

No noise-sensitive land uses are located within the RSA of the MSF. According to the Final Los Angeles International Airport (LAX) Part 150 Noise Exposure Map Update Report, the MSF would be located inside the airport's 65 to 70 community noise equivalent level contour, the time-weighted 24 hour average noise level for a location (Los Angeles World Airports 2015). The MSF would be located in an area within an acceptable range of noise exposure given the existing industrial land uses. Aircraft are the only source of noise from LAX in the MSF RSA, but noise from roadways and industrial land use adds to the overall noise levels. No flight paths cross the MSF site.

3.14.5.2 VIBRATION

3.14.5.2.1 REGIONAL SETTING

The KNE RSA is located in the Cities of Los Angeles and West Hollywood in Los Angeles County. The existing urban environment in this region is dominated by auto-oriented corridors, which are used frequently by automobiles, buses, and trucks. Although no vibration measurements were conducted to assess existing ambient vibration levels, vibration propagation test results from Metro's Westside Purple Line Extension project (Metro 2012) were used to determine how vibration would propagate from the tracks to GBV- and GBN-sensitive receivers.

3.14.5.2.1.1 ALIGNMENTS AND STATIONS

KNE SAN VICENTE–FAIRFAX ALIGNMENT

As shown in Figure 3.14-3, the KNE San Vicente–Fairfax Alignment has multiple areas with a tunnel depth of 110 feet or less, located between the following cross streets:

- Crenshaw Boulevard between Exposition Boulevard and I-10
- San Vicente Boulevard between Venice Boulevard and Orange Drive
- Where the tunnel passes under private properties near Olympic Boulevard and S Spaulding Avenue; S Genesee Avenue between Olympic Boulevard and 8th Street; S Ogden Drive between Olympic Boulevard and 8th Street; and S Orange Grove Avenue between 8th Street and Wilshire Boulevard
- S Fairfax Avenue between Wilshire Boulevard and 1st Street
- Beverly Boulevard between N Hayworth Avenue and N San Vicente Boulevard
- N Sherbourne Drive between N San Vicente Boulevard and Ashcroft Avenue
- N San Vicente Boulevard between Ashcroft Avenue and Santa Monica Boulevard
- Santa Monica Boulevard between N San Vicente Boulevard and N Orange Drive
- Where the tunnel passes under private properties near N Orange Drive and Santa Monica Boulevard; N Mansfield Avenue between Santa Monica Boulevard and Lexington Avenue; N Citrus Avenue between Santa Monica Boulevard and Lexington Avenue; and between Lexington Avenue and Highland Avenue
- Highland Avenue between Lexington Avenue and Hollywood Boulevard

FIGURE 3.14-3. VIBRATION-SENSITIVE LAND USES WITHIN KNE RESOURCE STUDY AREA

Source: Connect Los Angeles Partners 2024

Within these areas of the RSA, there are 151 vibration-sensitive land uses, as summarized in Table 3.14-12 and Figure 3.14-3.

TABLE 3.14-12. VIBRATION-SENSITIVE LAND USES WITHIN KNE SAN VICENTE–FAIRFAX ALIGNMENT RESOURCE STUDY AREA

LAND USE	# OF PARCELS	PARCEL USE/ADDRESS
Education[1]	7	• 5611 San Vicente Blvd • 567 S Fairfax Ave • 7951 Beverly Blvd • 1622 N Highland Ave • 7070, 7362, and 7924 Santa Monica Blvd
Residential	124	• 41 – SFR • 10 – Multi-Unit • 73 – Apartment Buildings
Art Gallery	0	• N/A
Worship Center	2	• West Angeles Church of God – 2 locations at 3602 and 3045 Crenshaw Blvd
Medical	5	• Complete Eye Care Center – 2825 Crenshaw Blvd • Olympia Hospital – 5901 W Olympic Blvd • Cedars-Sinai – 8700 Beverly Blvd • Modern Animal Hospital – 8126 Beverly Blvd • Hollywood Cat and Dog Hospital –1150 N La Brea Ave
School	5	• Hancock Park Elementary – 408 S Fairfax Ave • West Angeles Christian Academy – 3000 and 3004 Crenshaw Blvd • Hollywood Schoolhouse – 1248 N Highland Ave • Beverly Hills Children's Academy – 1105 N Laurel Ave
Museum	2	• Academy Museum of Motion Pictures – 6067 Wilshire Blvd • Peterson Automotive Museum – 6060 Wilshire Blvd
Theater	3	• Hollywood High School Theater – 1521 N Highland Ave[2] • West Angeles Performing Arts – 3020 Crenshaw Blvd • Lee Strasberg Theatre – 7936 Santa Monica Blvd
Hotel	3	• Ramada Plaza – 8585 Santa Monica Blvd • Short Story Hotel – 15 S Fairfax Ave • Sofitel Los Angeles at Beverley Hills – 8555 Beverly Blvd

Source: Connect Los Angeles Partners 2023
[1] The "education" category indicates an unspecified community or other educational land use.
[2] The Hollywood High School Theater was used to model vibration levels for other Hollywood High School buildings because it is closest to the proposed alignment.
N/A = not applicable; RSA = resource study area; SFR = single-family residence

KNE FAIRFAX ALIGNMENT

As shown in Figure 3.14-2 the Fairfax Alignment has seven areas with a tunnel depth of 110 feet or less, located between the following cross streets:

- Crenshaw Boulevard between Exposition Boulevard and I-10
- San Vicente Boulevard between Venice Boulevard and Orange Drive
- Where the tunnel passes under private properties near Olympic Boulevard and S Spaulding Avenue; S Genesee Avenue between Olympic Boulevard and 8th Street; S Ogden Drive between Olympic Boulevard and 8th Street; and S Orange Grove Avenue between 8th Street and Wilshire Boulevard
- S Fairfax Avenue between Wilshire Boulevard and 1st Street; N Fairfax Avenue between 1st Street and Melrose Avenue
- Where the tunnel passes under private properties near Waring Avenue and Fairfax Avenue; N Hayworth Avenue between Willoughby Avenue and Waring Avenue; Romaine Street between N Laurel Avenue and N Edinburgh Avenue; N Edinburgh Avenue between Romaine Street and Santa Monica Boulevard and between N Hayworth Avenue and Santa Monica Boulevard
- Where the tunnel passes under private properties near N Orange Drive and Santa Monica Boulevard; N Mansfield Avenue between Santa Monica Boulevard and Lexington Avenue; N Citrus Avenue between Santa Monica Boulevard and Lexington Avenue and between Lexington Avenue and Highland Avenue
- Highland Avenue between Lexington Avenue and Hollywood Boulevard

Within these four areas of the RSA, there are 185 vibration-sensitive land uses, as summarized in Table 3.14-13 and Figure 3.14-3.

TABLE 3.14-13. VIBRATION-SENSITIVE LAND USES WITHIN KNE FAIRFAX ALIGNMENT RESOURCE STUDY AREA

LAND USE	# OF PARCELS	PARCEL USE/ADDRESS
Education[1]	7	• 5611 San Vicente Blvd • 567 S Fairfax Ave • 1622 N Highland Ave • 1900 Hillcrest Rd • 7070, 7362, and 7924 Santa Monica Blvd
Residential	160	• 60 – SFR • 10 – Multi-Unit • 90 – Apartment Buildings
Art Gallery	0	• N/A
Worship Center	2	• West Angeles Church of God – 2 locations at 3602 and 3045 Crenshaw Blvd
Medical	3	• Complete Eye Care Center – 2825 Crenshaw Blvd • Olympia Hospital – 5901 W Olympic Blvd • Hollywood Cat and Dog Hospital –1150 N La Brea Ave

LAND USE	# OF PARCELS	PARCEL USE/ADDRESS
School	7	• Laurel Span School – 925 N Hayworth Ave • Hancock Park Elementary – 408 S Fairfax Ave • West Angeles Christian Academy – 3000 and 3004 Crenshaw Blvd • Hollywood Schoolhouse – 1248 N Highland Ave • Fairfax High School – 7850 Melrose Ave • Beverly Hills Children's Academy – 1105 N Laurel Ave
Museum	2	• Academy Museum of Motion Pictures – 6067 Wilshire Blvd • Peterson Automotive Museum – 6060 Wilshire Blvd
Theater	3	• West Angeles Performing Arts – 3020 Crenshaw Blvd • Hollywood High School Theater – 1521 N Highland Ave[2] • Lee Strasberg Theatre – 7936 Santa Monica Blvd
Hotel	1	• Short Story Hotel – 15 S Fairfax Ave

Source: Connect Los Angeles Partners 2023
[1] The "education" category indicates an unspecified community or other educational land use.
[2] The Hollywood High School Theater was used to model vibration levels for other Hollywood High School buildings because it is closest to the proposed alignment.
N/A = not applicable; RSA = resource study area; SFR = single-family residence

KNE LA BREA ALIGNMENT

As shown in Figure 3.14-3, the KNE La Brea Alignment has six areas with a tunnel depth of 110 feet or less, located between the following cross streets:

- Crenshaw Boulevard between Exposition Boulevard and I-10
- San Vicente Boulevard between Venice Boulevard and S Orange Drive
- S La Brea Avenue between Olympic Boulevard and W 6th Street
- S La Brea Avenue between 2nd Street and 1st Street; N La Brea Avenue between 1st Street and Lexington Avenue
- Where the tunnel passes under private properties near Lexington Avenue and N La Brea Avenue; Fountain Avenue and N Sycamore Avenue; N Orange Drive between Fountain Avenue and De Longpre Avenue; N Mansfield Avenue between Fountain Avenue and De Longpre Avenue; N Citrus Avenue between Fountain Avenue and De Longpre Avenue; De Longpre Avenue between N Mansfield Avenue and Highland Avenue; and between Leland Way and Highland Avenue
- Highland Avenue between Leland Way to Hollywood Boulevard

Within these three areas of the RSA, there are 86 vibration-sensitive land uses, as summarized in Table 3.14-14 and Figure 3.14-3.

TABLE 3.14-14. VIBRATION-SENSITIVE LAND USES WITHIN KNE LA BREA ALIGNMENT RESOURCE STUDY AREA

LAND USE	# OF PARCELS	PARCEL USE/ADDRESS
Education[1]	11	• 132, 330, 514, 516, 520, 524, 528, and 534 N La Brea Ave • 734 S La Brea Ave • 1622 N Highland Ave • 7070 Santa Monica Blvd
Residential	59	• 1 – SFR • 20 – Multi-Unit • 38 – Apartment Buildings
Art Gallery	1	• The Hole – 844 N La Brea Ave
Worship Center	3	• West Angeles Church of God – 2 locations at 3602 and 3045 Crenshaw Blvd • Congregation Levi Yitzhok – 356 N La Brea Ave
Medical	4	• Complete Eye Care Center – 2825 Crenshaw Blvd • The Rehabilitation Center – 501 N La Brea Ave • UCLA Health MPTF – 335 N La Brea Ave • Hollywood Cat and Dog Hospital –1150 N La Brea Ave
School	6	• West Angeles Christian Academy – 3000 and 3004 Crenshaw Blvd • Hollywood Schoolhouse – 1248 N Highland Ave • Bnos Esther – 116 N La Brea Ave • Yeshiva Rav Isacsohn – 540 and 555 N La Brea Ave
Museum	0	• N/A
Theater	2	• Hollywood High School Theater – 1521 N Highland Ave[2] • West Angeles Performing Arts – 3020 Crenshaw Blvd
Hotel	0	• N/A

Source: Connect Los Angeles Partners 2023
[1] The "education" category indicates an unspecified community or other educational land use.
[2] The Hollywood High School Theater was used to model vibration levels for other Hollywood High School buildings because it is closest to the proposed alignment.
N/A = not applicable; RSA = resource study area; SFR = single-family residence

3.14.5.2.1.2 HOLLYWOOD BOWL DESIGN OPTION

As shown in Figure 3.14-3, the Hollywood Bowl Design Option has one area with a tunnel depth of 110 feet or less, located between Highland Avenue between Franklin Road and Milner Road. Within this area of the RSA, there are four vibration-sensitive land uses: three hotels and one apartment complex.

3.14.5.2.1.3 MAINTENANCE AND STORAGE FACILITY

No vibration-sensitive land uses are located within the RSA for the MSF.

3.14.6 PROJECT MEASURES

Project measures are design features, best management practices, or other commitments that Metro would implement as part of all proposed alignments and stations, the design option, and the MSF to reduce or avoid environmental effects associated with project construction and operation. Project measures are not the same as mitigation measures, which are used to reduce an environmental impact's significance level. Where applicable, project measures are also discussed in Section 3.14.7 as part of the evaluation of environmental impacts.

3.14.6.1 PM NOI-1: GUIDELINES TO PROTECT CATEGORY 1 AND CATEGORY 3 LAND USES, HISTORIC BUILDINGS AND HISTORIC NON-BUILDING STRUCTURES DURING CONSTRUCTION

The general guidelines to protect Category 1 and Category 3 land uses, historic buildings, and historic non-building structures from damage during construction of the project alignments comprise project measure PM NOI-1 and are discussed below. These guidelines should be customized for listed or eligible historic properties. The detailed steps that may be required to protect historic and fragile buildings from damage during construction are as follows:

- Pre-Construction Survey: Metro or the contractor shall perform a pre-construction survey of the structural elements of historic buildings near major construction projects. Pre-construction surveys typically include inspecting building foundations, exterior, and interior elements and documenting any pre-existing defects such as cracks, settlement, subsidence, corrosion, or water damage. Defects that need to be monitored during construction shall be noted and, where appropriate, crack monitors shall be installed prior to the start of construction. For historic structures, the pre-construction survey also shall include an inspection of the historically significant features of the buildings, such as stained-glass windows, ornaments, and sheet metal cornices signboards in front of buildings, and engravings on the facade of buildings. The historical survey shall be performed by historic architects, and the structural survey shall be performed by qualified professional engineers prior to the start of construction. The survey report shall assist in the resolution of any damage claims that are made as a result of the construction. For Category 1 and Category 3 buildings, the survey shall document the type of use, location of use, and the existing vibration levels.
- Vibration Control Plan: Preliminary source vibration levels are presented in Table 3.14-15. These source levels are preliminary in nature and it is up to the contractor to verify and update information prior to and/or during construction. The contractor shall provide the results of the calculated vibration levels, with the locations for the calculations indicated on the site sketch in a vibration control plan to be submitted to Metro for approval. If the results of the vibration calculations or representative field data indicate that the predicted construction vibration levels exceed the damage risk criteria, the plan shall identify proposed vibration abatement measures and their anticipated vibration effects, include a schedule for their implementation, provide calculations demonstrating the effectiveness of the proposed abatement measures, and, if applicable, provide applicable drawings and sketches to indicate where such abatement measures would be placed.

TABLE 3.14-15. CONSTRUCTION VIBRATION

EQUIPMENT	PPV AT 25 FEET (INCH/SECOND)	APPROXIMATE L_V AT 25 FEET
Clam shovel drop (slurry wall)	0.202	94
Hydromill (slurry wall) in soil	0.0008	66
Hydromill (slurry wall) in rock	0.017	75
Vibratory roller	0.21	94
Hoe ram	0.089	87
Large bulldozer	0.089	87
Caisson drilling	0.089	87
Load trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

Source: FTA 2018
PPV = peak particle velocity; Lv = velocity level

- Vibration Monitoring: The primary goal of monitoring is to verify that the vibration limits are not exceeded. When construction activities that create high vibration levels are performed near vibration-sensitive buildings, the contractor would be required to monitor vibration to verify that the construction activities do not exceed the vibration limits. In addition, the contractor shall be required to perform testing to verify that the vibration levels would be below the applicable limits before starting the actual construction. For example, if vibratory compaction is needed near a historic building, a short test using the compactor would be monitored prior to starting the compaction to ensure that the vibration levels would be below the allowable limits. If vibration from the test approaches or exceeds the limits, the contractor shall immediately cease operations and conduct an inspection of the nearest historic property to determine if any damage occurred. The contractor shall be required to reduce the intensity of the vibratory compactor until the vibration amplitudes at all sensitive buildings are below the applicable limit before construction could resume. Only then would the actual vibratory compaction commence, with continued monitoring. The key guidelines for vibration monitoring are:
  - Minimize the use of impact devices, such as jackhammers, pavement breakers, and hoe rams that cause the highest vibration. Where possible, use concrete crushers or pavement saws rather than hoe rams for tasks such as concrete deck removal and retaining wall demolition.
  - Continuous vibration monitoring shall be performed whenever construction activities that generate high vibration levels are active within 100 feet of vibration-sensitive structures.
  - If the vibration levels exceed the allowable amplitudes, construction activities shall be halted immediately and the engineer shall be notified. Construction shall not be allowed to commence until the engineer approves the contractor's approach for reducing the vibration levels. The engineer shall be responsible for notifying property owners that the vibration limits were exceeded.

- For historic buildings, ground motion generated by construction activities shall not exceed a peak particle velocity (PPV) limit of 0.20 inch per second at any location within 10 feet of any part of the building. For the non-historic building structures, ground motion generated by construction activities shall not exceed a PPV limit of 0.50 inch per second at any location within 10 feet of any part of the structure.

- Visual Inspection During Construction: Follow-up visual inspection of particularly sensitive building features shall be performed during and after high vibration construction activities near sensitive buildings.
- Remove or Secure Fragile Elements: Before construction begins, some of the fragile elements in a building, such as chandeliers or wall decorations, shall be removed for the duration of the construction, or shall be more safely secured to the wall to ensure that they are not damaged or displaced due to high vibration activities.
- Secure or Repair Loose Elements: Any elements identified on a building as loose or in danger of damage due to a pre-existing condition shall be repaired prior to construction to ensure that high vibration activities do not exacerbate the problem. If it is not feasible to repair the element (which would be the building owner's responsibility), temporary means of securing the element shall be used.
- Alternative Construction Procedures: For some construction processes, it may not be feasible to meet the vibration limits. Examples include the use of vibratory compaction near churches and theaters, and operating large-tracked vehicles, such as bulldozers, next to sensitive buildings. In these cases, alternative construction processes may be required. Examples of these include use of non-vibratory compaction in limited areas and using a bobcat in place of large bulldozers within 25 feet of buildings.

3.14.6.2 PM NOI-2: FTA DETAILED VIBRATION ASSESSMENT

The vibration assessment conducted for this project is based on the conceptual design plans as of October 2023. Due to refinements that can occur in the design of the project, such as changes in depth or location of the tunnel, the predicted vibration impacts may be further analyzed once a preferred alignment is chosen. In the final design stage, Metro shall prepare an FTA Detailed Vibration Assessment for a more comprehensive analysis of the actual vibration impacts within the vicinity of the project.

This future vibration assessment would require borehole propagation tests at various locations within the vicinity of the project. The borehole tests would provide detailed data about which frequencies are transmitted through the ground.

The project is classified as a Frequent Event by the FTA vibration event criteria, as defined in the Transit Noise and Vibration Impact Assessment Manual (FTA 2018). Metro shall commit to constructing and operating the project within the FTA Category 3 land use GBV impact threshold of 75 VdB for Frequent Events. The FTA methodology includes a safety buffer of +5 VdB for all FTA thresholds to account for uncertainty in building amplification, future rail corrugations, and wheel roughness. Preparation of an FTA Detailed Vibration Assessment ensures construction and operation of the project would not exceed this GBV impact threshold.

3.14.7 IMPACT EVALUATION AND MITIGATION MEASURES

This analysis presents the construction and operational impacts for noise and vibration, as well as any applicable mitigation measures associated with KNE. A summary of the impact conclusions and applicable mitigation measures is found in Table 3.14-30 in Section 3.14.7.5.

3.14.7.1 IMPACT NOI-1: AMBIENT NOISE

Impact NOI-1: Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

3.14.7.1.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.14.7.1.1.1 CONSTRUCTION IMPACTS

Significant Impact. Construction of the KNE San Vicente–Fairfax Alignment would be required to comply with the local general plan or local noise ordinance. The actual construction approach and equipment will not be known until a contractor is identified.

At-grade construction at each station location would be the loudest phase, with a 1-hour L_{eq} of 91.2 dBA at 50 feet. This would exceed the LA City CEQA thresholds and the 1-hour L_{eq} FTA standards of 90 dBA during the day and 80 dBA at night for residential uses during cut-and-cover construction. The removal of soil and equipment during tunnel construction would exceed the nighttime 1-hour L_{eq} FTA standard and could exceed the daytime standards. Table 3.14-16 summarizes the impacts on noise-sensitive residential properties in the station RSAs during construction. Significant impacts would occur when either the FTA limit or the 5-dBA increase allowed in the LA City CEQA thresholds are exceeded. The table shows nearest sensitive land uses. When construction noise would result in a significant impact on a commercial building, the impacts are indicated in the table notes and are provided in the station descriptions below.

TABLE 3.14-16. CONSTRUCTION IMPACTS AT NOISE-SENSITIVE PROPERTIES WITHIN KNE SAN VICENTE–FAIRFAX ALIGNMENT RESOURCE STUDY AREA

STATION	ADDRESS OF NEAREST NOISE-SENSITIVE RECEIVER	DISTANCE TO NEAREST NOISE-SENSITIVE RECEIVER (FEET)	CONSTRUCTION PHASE	PREDICTED NOISE LEVEL (dBA)	# OF IMPACTS
Crenshaw/Adams*	2614 S Victoria Ave	25	At-Grade	94	6
			Cut-and-Cover	93	
			Tunnel (support)[1]	91	
Midtown Crossing	4729 San Vicente Blvd	110	At-Grade	81	20
			Cut-and-Cover	81	
			Tunnel (TBM)[2]	79	
Wilshire/Fairfax*	The Academy of Museum of Motion Pictures	20	At-Grade	94	3
			Cut-and-Cover	93	
			Tunnel (TBM)[2]	91	

STATION	ADDRESS OF NEAREST NOISE-SENSITIVE RECEIVER	DISTANCE TO NEAREST NOISE-SENSITIVE RECEIVER (FEET)	CONSTRUCTION PHASE	PREDICTED NOISE LEVEL (dBA)	# OF IMPACTS
Fairfax/3rd*,[3]	146 S Hayworth Ave[4]	150	At-Grade	79	4
			Cut-and-Cover	78	
			Tunnel (support)[1]	76	
La Cienega/Beverly*,[5]	321 N Alfred Street	70	At-Grade	85	3
			Cut-and-Cover	84	
			Tunnel (support)[1]	81	
San Vicente/Santa Monica*	830 Palm Ave	40	At-Grade	90	3
			Cut-and-Cover	89	
			Tunnel (TBM)[2]	87	
Fairfax/Santa Monica*,[5]	1050 N Orange Grove	150	At-Grade	74	3
			Cut-and-Cover	73	
			Tunnel (support)[1]	73	
La Brea/Santa Monica*	7100 Santa Monica Blvd	30	At-Grade	96	70
			Cut-and-Cover	95	
			Tunnel (TBM)[2]	96	
Hollywood/Highland*	1724 Highland Ave	30	At-Grade	92	3
			Cut-and-Cover	93	
			Tunnel (TBM)[2]	92	

Source: Connect Los Angeles Partners 2023

* There would be a significant impact at stations shown in **bold** and with an asterisk (*).

[1] Construction phases identified as "Tunnel (support)" indicate stations that would not serve as TBM launch or retrieval sites. Construction during the tunnel phase at these stations may include surface activities such as operation of generators and air compressors, lifts to provide access to underground work, cranes to deliver and remove supplies and equipment, and haul trucks.

[2] Construction phases identified as "Tunnel (TBM)" indicate stations that would serve as TBM launch or retrieval sites. At these stations, there would be noise impacts from surface construction and staging activities in support of the TBM, such as trucks to deliver supplies and haul away spoils, and operation of generators and air compressors. There would be no noise impacts from underground activities during the tunnel phase, including TBM operation.

[3] During construction of the Fairfax/3rd Station, noise levels at office and commercial land use along Fairfax Avenue would be 99 dBA during the at-grade phase, 98 dBA during the cut-and-cover phase, and 96 dBA during the tunnel phase, which are below FTA's commercial daytime and nighttime 1-hour L_{eq} limits; however, the noise levels may be more than the 5-dBA increase allowed in the LA City CEQA thresholds.

[4] Hancock Park Elementary School (408 S Fairfax Ave) would be within approximately 50 feet of a construction staging area but more than 250 feet from the station RSA. The at-grade, cut-and-cover, and tunnel construction activities associated with the station RSA would not occur at construction staging areas, where noise levels would be much lower. Therefore, 146 S Hayworth Ave is still considered the nearest receptor for impact purposes.

[5] During construction of the La Cienega/Beverly and Fairfax/Santa Monica Stations, noise levels at office and commercial land uses along Fairfax Avenue would be 96 dBA during the at-grade phase, 95 dBA during the cut-and-cover phase, and 93 dBA during the tunnel phase, which are below FTA's commercial daytime and nighttime 1-hour L_{eq} limits; however, the noise levels may be more than the 5-dBA increase allowed in the LA City CEQA thresholds.

dBA = A-weighted decibels; RSA = resource study area; TBM = tunnel boring machine

The following provides construction noise analysis for each of the KNE San Vicente–Fairfax Alignment stations:

- Crenshaw/Adams Station – **Significant Impact.** The nearest residential dwelling unit to the proposed construction area is 25 feet away (Table 3.14-16). Construction noise levels at that distance would be an hourly L_{eq} of more than 94 dBA during the at-grade construction phase, more than 93 dBA during the cut-and-cover phase, and more than 91 dBA during the tunnel phase, which would exceed local and FTA residential daytime and nighttime 1-hour L_{eq} limits. This would be considered a substantial temporary increase in ambient noise levels above the 5 dBA allowed in the LA City CEQA thresholds and above the FTA general assessment construction noise limit standard at six dwelling units. Therefore, the Crenshaw/Adams Station would have a significant impact during construction, and mitigation would be required.
- Midtown Crossing Station – **Less than Significant Impact.** The nearest residential dwelling unit to the proposed construction area is 110 feet away (Table 3.14-16). Construction noise levels at that distance would be an hourly L_{eq} of more than 81 dBA during the at-grade phase, more than 81 dBA during the cut-and-cover phase, and more than 79 dBA during the tunnel phase. This would not be considered a substantial temporary increase in ambient noise levels above the 5 dBA allowed in the LA City CEQA thresholds nor of the FTA general assessment construction noise limit standard. Therefore, the Midtown Crossing Station would have a less than significant impact during construction.
- Wilshire/Fairfax Station – **Significant Impact.** The nearest residential dwelling unit to the proposed construction area is 20 feet away (Table 3.14-16). Construction noise levels at that distance would be an hourly L_{eq} of more than 94 dBA during the at-grade phase, 93 dBA during the cut-and-cover phase, and more than 91 dBA during the tunnel phase. Construction would be located on Fairfax Avenue, within 20 feet of the Academy Museum of Motion Pictures. This would be considered a substantial temporary increase in ambient noise levels above the 5 dBA allowed in the LA City CEQA thresholds and above the FTA general assessment construction noise limit standard. Therefore, the Wilshire/Fairfax Station would have a significant impact during construction, and mitigation would be required.
- Fairfax/3rd Station – **Significant Impact.** The nearest residential dwelling unit to the proposed construction area is 150 feet away (Table 3.14-16). Construction noise levels at that distance would be an hourly L_{eq} less than 79 dBA during the at-grade phase, less than 78 dBA during the cut-and-cover phase, and less than 76 dBA during the tunnel phase, which are below FTA's residential daytime and nighttime 1-hour L_{eq} limits; however, the noise levels may be above the 5 dBA allowed in the LA City CEQA thresholds at four dwelling units. The noise levels at the office and commercial land use along Fairfax Avenue would be 99 dBA during the at-grade phase, 98 dBA during the cut-and-cover phase, and 96 dBA during the tunnel phase, which are below FTA's commercial daytime and nighttime 1-hour L_{eq} limits; however, the noise levels may be in excess of the 5-dBA increase allowed in the LA City CEQA thresholds. Hancock Park Elementary School is located approximately 50 feet from a construction staging area but outside the station RSA. The school could experience increases in noise levels due to activities at the construction staging area, primarily involving movement of equipment. Although noise levels would be lower than those associated with at-grade, cut-and-cover, and tunnel TBM/support construction

activities (approximately 250 feet from the school), increases could be above the 5 dBA allowed in the LA City CEQA thresholds. Therefore, the Fairfax/3rd Station would have a significant impact during construction, and mitigation would be required.

- La Cienega/Beverly Station – **Significant Impact.** The nearest residential dwelling unit to the proposed construction is 70 feet away (Table 3.14-16). Construction noise levels at that distance would be an hourly L_{eq} less than 85 dBA during the at-grade phase, 84 dBA during the cut-and-cover phase, and 81 dBA during the tunnel phase. The noise levels at the office and commercial land use along Fairfax would be 96 dBA during the at-grade phase, 95 dBA during the cut-and-cover phase, and 93 dBA during the tunnel phase. While these levels are below the FTA daytime and nighttime 1-hour L_{eq} limits, the noise levels may increase above the 5 dBA allowed in the LA City CEQA thresholds at three dwelling units. Therefore, the La Cienega/Beverly Station would have a significant impact during construction, and mitigation would be required.
- San Vicente/Santa Monica Station – **Significant Impact.** The nearest residential dwelling unit to the construction is 40 feet away (Table 3.14-16). Construction noise levels at that distance would be an hourly L_{eq} over 90 dBA during the at-grade phase, 89 dBA during the cut-and-cover phase, and 87 dBA during the tunnel phase. This would be considered a substantial temporary increase in ambient noise levels at three dwelling units. Therefore, the San Vicente/Santa Monica Station would have a significant impact during construction, and mitigation would be required.
- Fairfax/Santa Monica Station – **Significant Impact.** The nearest residential dwelling unit to the construction is 150 feet away (Table 3.14-16). Construction noise levels at that distance would be an hourly L_{eq} under 74 dBA during the at-grade phase, 73 dBA during the cut-and-cover phase, and 73 dBA during the tunnel phase. The noise levels at the office and commercial land use along Fairfax would be 96 dBA during the at-grade phase, 95 dBA during the cut-and-cover phase, and 93 dBA during the tunnel phase. This would be considered a substantial temporary increase in ambient noise levels at three dwelling units. Therefore, the Fairfax/Santa Monica Station would have a significant impact during construction, and mitigation would be required.
- La Brea/Santa Monica Station – **Significant Impact.** The nearest residential dwelling unit to the construction is 30 feet away (Table 3.14-16). Construction noise levels at that distance would be an hourly L_{eq} more than 96 dBA during the at-grade phase, more than 95 dBA during the cut-and-cover phase, and more than 96 dBA during the tunnel phase. The noise levels may increase above the 5 dBA allowed in the LA City CEQA thresholds. This would be considered a substantial temporary increase in ambient noise levels at 70 dwelling units. Therefore, the La Brea/Santa Monica Station would have a significant impact during construction, and mitigation would be required.
- Hollywood/Highland Station – **Significant Impact.** The nearest residential dwelling unit to the construction is 30 feet away (Table 3.14-16). Construction noise levels at that distance would be an hourly L_{eq} over 92 dBA during the at-grade phase, more than 93 dBA during the cut-and-cover phase, and more than 92 dBA during the tunnel phase. This would be considered a substantial temporary increase in ambient noise levels at three dwelling units. Therefore, the Hollywood/Highland Station would have a significant impact during construction, and mitigation would be required.

Construction of eight of the stations (all except the Midtown Crossing Station) would generate substantial temporary increases in ambient noise levels in excess of standards established in the applicable CEQA thresholds and/or the applicable FTA noise-level criteria. Therefore, the KNE San Vicente–Fairfax Alignment would have a significant impact during construction, and mitigation would be required.

3.14.7.1.1.2 OPERATIONAL IMPACTS

No Impact. Of the nine stations along the KNE San Vicente–Fairfax Alignment, six have noise-sensitive land uses within their RSAs: Crenshaw/Adams, Midtown Crossing, Wilshire/Fairfax, La Cienega/Beverly, San Vicente/Santa Monica, and La Brea/Santa Monica. However, no additional parking or buses are planned for any of these stations, so noise from operations would be limited to people at the stations and the escalators and elevators used to enter and exit the stations. The noise-sensitive land uses within the RSA are all 100 feet or more from the proposed station entrances, and there would be no direct line of sight between the light rail vehicles at the stations and aboveground sensitive receivers. As a result, noise levels associated with operation of stations would be far below the applicable FTA noise-level criteria.

Outside the station areas, operation of the alignment would occur underground, so there would be no increase in airborne noise level to any of the noise-sensitive land uses in the RSA. Station activities that occur aboveground would not involve any noise-generating equipment. For these reasons, operation of the alignment would not result in an increase in ambient noise levels. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during operation.

3.14.7.1.2 KNE FAIRFAX ALIGNMENT

3.14.7.1.2.1 CONSTRUCTION IMPACTS

Significant Impact. Construction of the KNE Fairfax Alignment would be required to comply with the local general plan or local noise ordinance. The actual construction approach and equipment will not be known until a contractor is identified.

At-grade construction at each station location would be the loudest phase, with a 1-hour L_{eq} of 91.2 dBA at 50 feet. This would exceed the LA City CEQA thresholds and the 1-hour L_{eq} FTA standards of 90 dBA during the day and 80 dBA at night for residential uses during cut-and-cover construction. The removal of soil and equipment during tunnel construction would exceed the nighttime 1-hour L_{eq} FTA standard and could exceed the daytime standards. Table 3.14-17 summarizes the impacts on noise-sensitive residential properties in the station RSAs during construction. Significant impacts would occur when either the FTA limit or the 5-dBA increase allowed in the LA City CEQA thresholds are exceeded. The table shows nearest sensitive land uses. When construction noise would result in a significant impact on a commercial building, the impacts are indicated in the table notes and are provided in the station descriptions below.

TABLE 3.14-17. CONSTRUCTION IMPACTS AT NOISE-SENSITIVE PROPERTIES WITHIN KNE FAIRFAX ALIGNMENT RESOURCE STUDY AREA

STATION	ADDRESS OF NEAREST NOISE-SENSITIVE RECEIVER	DISTANCE TO NEAREST NOISE-SENSITIVE RECEIVER (FEET)	CONSTRUCTION PHASE	PREDICTED NOISE LEVEL (dBA)	# OF IMPACTS
Crenshaw/Adams*	2614 S Victoria Ave	25	At-Grade	94	6
			Cut-and-Cover	93	
			Tunnel (support)[1]	91	
Midtown Crossing	4729 San Vicente Blvd	110	At-Grade	81	20
			Cut-and-Cover	81	
			Tunnel (TBM)[2]	79	
Wilshire/Fairfax*	The Academy of Museum of Motion Pictures	20	At-Grade	94	3
			Cut-and-Cover	93	
			Tunnel (TBM)[2]	91	
Fairfax/3rd*[,3]	146 S Hayworth Ave[4]	150	At-Grade	79	4
			Cut-and-Cover	78	
			Tunnel (support)[1]	76	
Fairfax/Santa Monica*[,5]	1050 N Orange Grove	150	At-Grade	74	3
			Cut-and-Cover	73	
			Tunnel (support)[1]	73	
La Brea/Santa Monica*	7100 Santa Monica Blvd	30	At-Grade	96	70
			Cut-and-Cover	95	
			Tunnel (TBM)[2]	96	
Hollywood/Highland*	1724 Highland Ave	30	At-Grade	92	3
			Cut-and-Cover	93	
			Tunnel (TBM)[2]	92	

Source: Connect Los Angeles Partners 2023

* There would be a significant impact at stations shown in **bold** and with an asterisk (*).

[1] Construction phases identified as "Tunnel (support)" indicate stations that would not serve as TBM launch or retrieval sites. Construction during the tunnel phase at these stations may include surface activities such as operation of generators and air compressors, lifts to provide access to underground work, cranes to deliver and remove supplies and equipment, and haul trucks.

[2] Construction phases identified as "Tunnel (TBM)" indicate stations that would serve as TBM launch or retrieval sites. At these stations, there would be noise impacts from surface construction and staging activities in support of the TBM, such as trucks to deliver supplies and haul away spoils, and operation of generators and air compressors. There would be no noise impacts from underground activities during the tunnel phase, including TBM operation.

[3] During construction of the Fairfax/3rd Station, noise levels at office and commercial land use along Fairfax Avenue would be 99 dBA during the at-grade phase, 98 dBA during the cut-and-cover phase, and 96 dBA during the tunnel phase, which are below FTA's commercial daytime and nighttime 1-hour L_{eq} limits; however, the noise levels may be more than the 5-dBA increase allowed in the LA City CEQA thresholds.

[4] Hancock Park Elementary School (408 S Fairfax Ave) would be within approximately 50 feet of a construction staging area but more than 250 feet from the station RSA. The at-grade, cut-and-cover, and tunnel construction activities associated with the station RSA would not occur at construction staging areas, where noise levels would be much lower. Therefore, 146 S Hayworth Ave is still considered the nearest receptor for impact purposes.

[5] During construction of the Fairfax/Santa Monica Station, noise levels at office and commercial land uses along Fairfax Avenue would be 96 dBA during the at-grade phase, 95 dBA during the cut-and-cover phase, and 93 dBA during the tunnel phase, which are below FTA's commercial daytime and nighttime 1-hour L_{eq} limits; however, the noise levels may be more than the 5-dBA increase allowed in the LA City CEQA thresholds.

dBA = A-weighted decibels; RSA = resource study area; TBM = tunnel boring machine

The following provides construction noise analysis for each of the KNE Fairfax Alignment stations:

- Crenshaw/Adams Station – **Significant Impact.** The nearest residential dwelling unit to the proposed construction area is 25 feet away (Table 3.14-17). Construction noise levels at that distance would be an hourly L_{eq} of more than 94 dBA during the at-grade construction phase, more than 93 dBA during the cut-and-cover phase, and more than 91 dBA during the tunnel phase, which would exceed local and FTA residential daytime and nighttime 1-hour L_{eq} limits. This would be considered a substantial temporary increase in ambient noise levels above the 5 dBA allowed in the LA City CEQA thresholds and above the FTA general assessment construction noise limit standard at six dwelling units. Therefore, the Crenshaw/Adams Station would have a significant impact during construction, and mitigation would be required.
- Midtown Crossing Station – **Less than Significant Impact.** The nearest residential dwelling unit to the proposed construction area is 110 feet away (Table 3.14-17). Construction noise levels at that distance would be an hourly L_{eq} of more than 81 dBA during the at-grade phase, more than 81 dBA during the cut-and-cover phase, and more than 79 dBA during the tunnel phase. This would not be considered a substantial temporary increase in ambient noise levels above the 5 dBA allowed in the LA City CEQA thresholds nor of the FTA general assessment construction noise limit standard. Therefore, the Midtown Crossing Station would have a less than significant impact during construction.
- Wilshire/Fairfax Station – **Significant Impact.** The nearest residential dwelling unit to the proposed construction area is 20 feet away (Table 3.14-17). Construction noise levels at that distance would be an hourly L_{eq} of more than 94 dBA during the at-grade phase, 93 dBA during the cut-and-cover phase, and more than 91 dBA during the tunnel phase. Construction would be located on Fairfax Avenue, within 20 feet of the Academy Museum of Motion Pictures. This would be considered a substantial temporary increase in ambient noise levels above the 5 dBA allowed in the LA City CEQA thresholds and above the FTA general assessment construction noise limit standard. Therefore, the Wilshire/Fairfax Station would have a significant impact during construction, and mitigation would be required.
- Fairfax/3rd Station – **Significant Impact.** The nearest residential dwelling unit to the proposed construction area is 150 feet away (Table 3.14-17). Construction noise levels at that distance would be an hourly L_{eq} of less than 79 dBA during the at-grade phase, less than 78 dBA during the cut-and-cover phase, and less than 76 dBA during the tunnel phase, which are below FTA's residential daytime and nighttime 1-hour L_{eq} limits; however, the noise levels may be above the 5 dBA allowed in the LA City CEQA thresholds at four dwelling units. The noise levels at the office and commercial land use along Fairfax Avenue would be 99 dBA during the at-grade phase, 98 dBA during the cut-and-cover phase, and 96 dBA during the tunnel phase, which are below FTA's commercial daytime and nighttime 1-hour L_{eq} limits; however, the noise levels may be in excess of the 5-dBA increase allowed in the LA City CEQA thresholds. Hancock Park Elementary School is located approximately 50 feet from a construction staging area but outside the station RSA. The school could experience increases in noise levels due to activities at the construction staging area, primarily involving movement of equipment. Although noise levels would be lower than those associated with at-grade, cut-and-cover, and tunnel TBM/support construction activities (approximately 250 feet from the school), increases could be above the 5 dBA allowed

in the LA City CEQA thresholds. Therefore, the Fairfax/3rd Station would have a significant impact during construction, and mitigation would be required.

- Fairfax/Santa Monica Station – **Significant Impact.** The nearest residential dwelling unit to the construction is 150 feet away (Table 3.14-17). Construction noise levels at that distance would be an hourly L_{eq} under 74 dBA during the at-grade phase, 73 dBA during the cut-and-cover phase, and 73 dBA during the tunnel phase. The noise levels at the office and commercial land use along Fairfax would be 96 dBA during the at-grade phase, 95 dBA during the cut-and-cover phase, and 93 dBA during the tunnel phase. This would be considered a substantial temporary increase in ambient noise levels at three dwelling units. Therefore, the Fairfax/Santa Monica Station would have a significant impact during construction, and mitigation would be required.
- La Brea/Santa Monica Station – **Significant Impact.** The nearest residential dwelling unit to the construction is 30 feet away (Table 3.14-17). Construction noise levels at that distance would be an hourly L_{eq} of more than 96 dBA during the at-grade phase, more than 95 dBA during the cut-and-cover phase, and more than 96 dBA during the tunnel phase. The noise levels may increase above the 5 dBA allowed in the LA City CEQA thresholds. This would be considered a substantial temporary increase in ambient noise levels at 70 dwelling units. Therefore, the La Brea/Santa Monica Station would have a significant impact during construction, and mitigation would be required.
- Hollywood/Highland Station – **Significant Impact.** The nearest residential dwelling unit to the construction is 30 feet away (Table 3.14-17). Construction noise levels at that distance would be an hourly L_{eq} over 92 dBA during the at-grade phase, more than 93 dBA during the cut-and-cover phase, and more than 92 dBA during the tunnel phase. This would be considered a substantial temporary increase in ambient noise levels at three dwelling units. Therefore, the Hollywood/Highland Station would have a significant impact during construction, and mitigation would be required.

Construction of six of the stations (all except the Midtown Crossing Station) would generate substantial temporary increases in ambient noise levels in excess of standards established in the applicable CEQA thresholds and/or the applicable FTA noise-level criteria. Therefore, the KNE Fairfax Alignment would have a significant impact during construction, and mitigation would be required.

3.14.7.1.2.2 OPERATIONAL IMPACTS

No Impact. Of the seven stations along the KNE Fairfax Alignment, four have noise-sensitive land uses within their RSAs: Crenshaw/Adams, Midtown Crossing, Wilshire/Fairfax, and La Brea/Santa Monica. However, no additional parking or buses are planned for any of these stations, so noise from operations would be limited to people at the stations and the escalators and elevators used to enter and exit the stations. The noise-sensitive land uses within the RSA are all 100 feet or more from the proposed station entrances, and there would be no direct line of sight between the light rail vehicles at the stations and aboveground sensitive receivers. As a result, noise levels associated with operation of stations would be far below the applicable FTA noise-level criteria.

Outside the station areas, operation of the alignment would occur underground, so there would be no increase in airborne noise levels to any of the noise-sensitive land uses in the RSA. Station activities that occur aboveground would not involve any noise-generating equipment. For these reasons, operation of the alignment would not result in an increase in ambient noise levels. Therefore, the KNE Fairfax Alignment would have no impact during operation.

3.14.7.1.3 KNE LA BREA ALIGNMENT

3.14.7.1.3.1 CONSTRUCTION IMPACTS

Significant Impact. Construction of the KNE La Brea Alignment would be required to comply with the local general plan or local noise ordinance. The actual construction approach and equipment will not be known until a contractor is identified.

At-grade construction at each station location would be the loudest phase, with a 1-hour L_{eq} of 91.2 dBA at 50 feet. This would exceed the LA City CEQA thresholds and the 1-hour L_{eq} FTA standards of 90 dBA during the day and 80 dBA at night for residential uses during cut-and-cover construction. The removal of soil and equipment during tunnel construction would exceed the nighttime 1-hour L_{eq} FTA standard and could exceed the daytime standards. Table 3.14-18 summarizes the impacts on noise-sensitive residential properties in the station RSAs during construction. Significant impacts would occur when either the FTA limit or the 5-dBA increase allowed in the LA City CEQA thresholds are exceeded. The table shows nearest sensitive land uses. When construction noise would result in a significant impact on a commercial building, the impacts are indicated in the table notes and are provided in the station descriptions below.

TABLE 3.14-18. CONSTRUCTION IMPACTS AT NOISE-SENSITIVE PROPERTIES WITHIN KNE LA BREA ALIGNMENT RESOURCE STUDY AREA

STATION	ADDRESS OF NEAREST NOISE-SENSITIVE RECEIVER	DISTANCE TO NEAREST NOISE-SENSITIVE RECEIVERS (FEET)	CONSTRUCTION PHASE	PREDICTED NOISE LEVEL (dBA)	# OF IMPACTS
Crenshaw/Adams*	2614 S Victoria Ave	25	At-Grade	94	6
			Cut-and-Cover	93	
			Tunnel (support)[1]	91	
Midtown Crossing	4729 San Vicente Blvd	110	At-Grade	81	20
			Cut-and-Cover	81	
			Tunnel (TBM)[2]	79	
Wilshire/La Brea*	460 S Detroit St	30	At-Grade	96	54
			Cut-and-Cover	95	
			Tunnel (TBM)[2]	96	
La Brea/Beverly*	318 N Detroit St	30	At-Grade	96	46
			Cut-and-Cover	95	
			Tunnel (support)[1]	96	
La Brea/Santa Monica*	7100 Santa Monica Blvd	30	At-Grade	96	70
			Cut-and-Cover	95	
			Tunnel (TBM)[2]	96	
Hollywood/Highland*	1724 Highland Ave	30	At-Grade	92	3
			Cut-and-Cover	93	
			Tunnel (TBM)[2]	92	

Source: Connect Los Angeles Partners 2023

***** There would be a significant impact at stations shown in **bold** and with an asterisk (*****).

[1] Construction phases identified as "Tunnel (support)" indicate stations that would not serve as TBM launch or retrieval sites. Construction during the tunnel phase at these stations may include surface activities such as operation of generators and air compressors, lifts to provide access to underground work, cranes to deliver and remove supplies and equipment, and haul trucks.

[2] Construction phases identified as "Tunnel (TBM)" indicate stations that would serve as TBM launch or retrieval sites. At these stations, there would be noise impacts from surface construction and staging activities in support of the TBM, such as trucks to deliver supplies and haul away spoils, and operation of generators and air compressors. There would be no noise impacts from underground activities during the tunnel phase, including TBM operation.

dBA = A-weighted decibels; RSA = resource study area; TBM = tunnel boring machine

The following provides construction noise analysis for each of the La Brea Alignment stations:

- Crenshaw/Adams Station – Significant Impact. The nearest residential dwelling unit to the proposed construction area is 25 feet away (Table 3.14-18). Construction noise levels at that distance would be an hourly L_{eq} of more than 94 dBA during the at-grade construction phase, more than 93 dBA during the cut-and-cover phase, and more than 91 dBA during the tunnel phase, which would exceed local and FTA residential daytime and nighttime 1-hour L_{eq} limits. This would be considered a substantial temporary increase in ambient noise levels above the 5 dBA allowed in the LA City CEQA thresholds and above the FTA general assessment construction noise limit standard at six dwelling units. Therefore, the Crenshaw/Adams Station would have a significant impact during construction, and mitigation would be required.
- Midtown Crossing Station – Less than Significant Impact. The nearest residential dwelling unit to the proposed construction area is 110 feet away (Table 3.14-18). Construction noise levels at that distance would be an hourly L_{eq} of more than 81 dBA during the at-grade phase, more than 81 dBA during the cut-and-cover phase, and more than 79 dBA during the tunnel phase. This would not be considered a substantial temporary increase in ambient noise levels above the 5 dBA allowed in the LA City CEQA thresholds nor of the FTA general assessment construction noise limit standard. Therefore, the Midtown Crossing Station would have a less than significant impact during construction.
- Wilshire/La Brea Station – Significant Impact. The nearest residential dwelling unit to the proposed construction area is 30 feet away (Table 3.14-18). Construction noise levels at that distance would be an hourly L_{eq} of more than 96 dBA during the at-grade construction phase, more than 95 dBA during the cut-and-cover phase, and more than 96 dBA during the tunnel phase, which exceed local and FTA's residential daytime and nighttime 1-hour L_{eq} limits. This would be considered a substantial temporary increase in ambient noise levels above the 5 dBA allowed in the LA City CEQA thresholds and above the FTA general assessment construction noise limit standard on 54 dwelling units. Therefore, the Wilshire/La Brea Station would have a significant impact during construction, and mitigation would be required.
- La Brea/Beverly Station – Significant Impact. The nearest residential dwelling unit to the proposed construction area is 30 feet away (Table 3.14-18). Construction noise levels at that distance would be an hourly L_{eq} of more than 96 dBA during the at-grade construction phase, more than 95 dBA during the cut-and-cover phase, and more than 96 dBA during the tunnel phase, which exceed local and FTA's residential daytime and nighttime 1-hour L_{eq} limits. This would be considered a substantial temporary increase in ambient noise levels above the 5 dBA allowed in the LA City CEQA thresholds and above the FTA general assessment construction noise limit standard on 46 dwelling units. Therefore, the La Brea/Beverly Station would have a significant impact during construction, and mitigation would be required.
- La Brea/Santa Monica Station – Significant Impact. The nearest residential dwelling unit to the construction is 30 feet away (Table 3.14-18). Construction noise levels at that distance would be an hourly L_{eq} of more than 96 dBA during the at-grade phase, more than 95 dBA during the cut-and-cover phase, and more than 96 dBA during the tunnel phase. The noise levels may increase above the 5 dBA allowed in the LA City CEQA thresholds. This would be considered a substantial temporary increase in ambient noise levels at 70 dwelling units. Therefore, the La Brea/Santa Monica Station would have a significant impact during construction, and mitigation would be required.

- Hollywood/Highland Station– Significant Impact. The nearest residential dwelling unit to the construction is 30 feet away (Table 3.14-18). Construction noise levels at that distance would be an hourly L_{eq} over 92 dBA during the at-grade phase, more than 93 dBA during the cut-and-cover phase, and more than 92 dBA during the tunnel phase. This would be considered a substantial temporary increase in ambient noise levels at three dwelling units. Therefore, the Hollywood/Highland Station would have a significant impact during construction, and mitigation would be required.

Construction of five of the La Brea Alignment stations (all except the Midtown Crossing Station) would generate substantial temporary increases in ambient noise levels in excess of standards established in the LA City CEQA thresholds and/or the applicable FTA noise-level criteria. Therefore, the KNE La Brea Alignment would have a significant impact during construction, and mitigation would be required.

3.14.7.1.3.2 OPERATIONAL IMPACTS

No Impact. Of the six stations along the La Brea Alignment, five have noise-sensitive land uses within their RSAs: Crenshaw/Adams, Midtown Crossing, Wilshire/La Brea, La Brea/Beverly, and La Brea/Santa Monica. However, no additional parking or buses are planned for any of these stations, so noise from operations would be limited to people at the stations and the escalators and elevators used to enter and exit the stations. The noise-sensitive land uses within the RSA are all 100 feet or more from the proposed station entrances, and there would be no direct line of sight between the light rail vehicles at the stations and aboveground sensitive receivers. As a result, noise levels associated with operation of stations would be far below the applicable FTA noise-level criteria.

Outside the station areas, operation of the alignment would occur underground, so there would be no increase in airborne noise levels to any of the noise-sensitive land uses in the RSA. Station activities that occur aboveground would not involve any noise-generating equipment. For these reasons, operation of the alignment would not result in an increase in ambient noise levels. Therefore, the KNE La Brea Alignment would have no impact during operation.

3.14.7.1.4 HOLLYWOOD BOWL DESIGN OPTION

3.14.7.1.4.1 CONSTRUCTION IMPACTS

Significant Impact. The Hollywood Bowl Design Option would be located under Highland Avenue, with construction staging areas proposed within Parking Lots B, C, and D of the Hollywood Bowl. The nearest residential dwelling unit to the proposed construction area is 70 feet away (Table 3.14-19). Construction noise levels at sensitive receivers would be an hourly L_{eq} of less than 85 dBA during the at-grade phase, less than 84 dBA during the cut-and-cover phase, and less than 81 dBA during the tunnel phase. The nearest sensitive noise receiver is more than 200 feet from the entrance to the Hollywood Bowl. Construction activity may be considered a substantial temporary increase in ambient noise levels above the 5 dBA allowed in the LA City CEQA thresholds at 40 dwelling units. Therefore, the Hollywood Bowl Design Option (Hollywood Bowl Station) would have a significant impact during construction, and mitigation would be required.

TABLE 3.14-19. CONSTRUCTION IMPACTS AT NOISE-SENSITIVE RESIDENTIAL PROPERTIES WITHIN HOLLYWOOD BOWL DESIGN OPTION RESOURCE STUDY AREA

STATION	ADDRESS OF NEAREST NOISE-SENSITIVE RECEIVER	DISTANCE TO NEAREST NOISE-SENSITIVE RECEIVERS (FEET)	CONSTRUCTION PHASE	PREDICTED NOISE LEVEL (dBA)	# OF IMPACTS
Hollywood Bowl Station*	2614 S Victoria Ave	70	At-Grade	85	40
			Cut-and-Cover	84	
			Tunnel (TBM)[1]	81	

Source: Connect Los Angeles Partners 2023
dBA = A-weighted decibels; RSA = resource study area; TBM = tunnel boring machine
* Significant Impact
[1] "Tunnel (TBM)" indicates that the Hollywood Bowl Station would serve as a TBM retrieval site during the tunnel construction phase. There would be noise impacts from surface construction and staging activities in support of the TBM, such as trucks to deliver supplies and haul away spoils, and operation of generators and air compressors. There would be no noise impacts from underground activities during the tunnel phase, including TBM operation.

3.14.7.1.4.2 OPERATIONAL IMPACTS

No Impact. No noise-sensitive land uses are located within the RSA of the station associated with the Hollywood Bowl Design Option. The Hollywood Bowl is located more than 200 feet from the proposed design option. Therefore, the design option would have no impact during operation.

3.14.7.1.5 MAINTENANCE AND STORAGE FACILITY

3.14.7.1.5.1 CONSTRUCTION IMPACTS

No Impact. The MSF site is within 0.5 mile of Los Angeles International Airport (LAX). While construction of the MSF expansion would expose people working in the area to increased noise levels, existing noise levels in this area are high due to the overflights of planes landing at LAX and from roadways and industrial land use. All construction activities associated with the MSF would be aboveground. However, there are no residential land uses within 200 feet of the proposed construction. Therefore, the MSF would have no impact during construction.

3.14.7.1.5.2 OPERATIONAL IMPACTS

No Impact. As described for construction impacts, existing noise levels in the MSF RSA are high due to the overflights of planes landing at LAX. No noise-sensitive land uses are located within the MSF RSA. Therefore, the MSF would have no impact during operation.

3.14.7.2 IMPACT NOI-2: GROUND-BORNE NOISE AND VIBRATION

Impact NOI-2: Would the project result in generation of excessive GBV or GBN levels?

3.14.7.2.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.14.7.2.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. During construction, GBV and GBN would be of concern primarily in the tunnel phase. As such, the study of potential GBV and GBN construction impacts focuses on the underground alignments. Potential GBV and GBN impacts could also occur in the early stages of the cut-and-cover alignment construction and during aboveground station construction activities, but this would depend on the method of construction that the contractor chooses to use.

The predicted GBV and GBN at sensitive receivers in the RSA above the underground portions of the KNE San Vicente–Fairfax Alignment are presented in Table 3.14-20 for FTA Special Buildings, Table 3.14-21 for FTA Category 2 residential land uses, and Table 3.14-22 for FTA Category 3 institutional land uses.[1] Project measure PM NOI-1 would be implemented to protect any Category 1 or 3 land uses, historic buildings, and historic non-building structures from damage during construction. Project measure PM NOI-2 would also be implemented to ensure that at a later stage of design, once a preferred alignment is selected, an FTA Detailed Vibration Assessment would be conducted to further analyze vibration impacts. As a result, the predicted GBV and GBN at sensitive receivers above the underground portions of the alignment would not exceed FTA impact criteria.

Construction of the tunnel would be mostly underground. Vibration from the tunnel boring machine would be at or below the levels predicted for light rail vehicle operations. Implementation of a vibration control plan and vibration monitoring as per project measure PM NOI-1 would ensure station construction at the surface would not result in excessive GBV and GBN levels. The vibration generated by the tunnel boring machine would be temporary, lasting for a few days as it passes under the different receiver locations. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.14.7.2.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE San Vicente–Fairfax Alignment would also occur primarily underground, which is the only potential source of GBV and GBN impacts from light rail vehicle operations. Light rail vehicles moving through the stations would be the concern for operational vibration impacts at the station locations. The only operational activity that would not be underground is people entering and exiting the station, which has no risk of GBV or GBN impacts. However, because borehole line source response testing was not conducted as part of this assessment, the theaters and performing arts spaces identified as FTA Special Buildings would require further study as part of final design.

While there are FTA Special Buildings, Category 2 residential land uses, and Category 3 institutional land uses in the KNE San Vicente–Fairfax Alignment RSA, as shown in Table 3.14-20, Table 3.14-21, and Table 3.14-22, the predicted GBV and GBN at sensitive receivers in the RSA would not exceed FTA impact criteria. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

[1] For this analysis, the Academy Museum of Motion Pictures is considered a Category 3 land use due to its usage as a movie theater.

TABLE 3.14-20. KNE SAN VICENTE–FAIRFAX ALIGNMENT PREDICTED VIBRATION LEVELS AT FTA SPECIAL BUILDINGS

CITY	BUILDING ACTIVITIES AND ADDRESS	PREDICTED GBV[1]	FTA GBV CRITERIA (VdB)	GBV EXCEEDANCE (Y/N)	PREDICTED GBN[2]	FTA GBN CRITERIA (dBA)	GBN EXCEEDANCE (Y/N)
Los Angeles	West Angeles Performing Arts Theatre 3020 Crenshaw Blvd	53	72	N	30	35	N
West Hollywood	Education/Lee Strasberg Theatre 7936 Santa Monica Blvd	52	72	N	28	35	N
Los Angeles	Hollywood High School Theater 1521 N Highland Ave	60	72	N	33	35	N

Source: Connect Los Angeles Partners 2023
Note: Vibration from the TBM would be at or below the levels predicted for train operations. Implementation of a vibration control plan and vibration monitoring as per PM NOI-1 would ensure station construction at the surface would not result in excessive GBV and GBN levels. Therefore, the levels and impacts shown in this table can be used for both construction and operations.
[1] As a safety factor, no building loss was assumed.
[2] A value of -5 dB can be used for K_{rad} for typical residential rooms.
dBA = A-weighted decibels; GBN = ground-borne noise; GBV = ground-borne vibration; K_{rad} = radiation factor; VdB = vibration decibels

TABLE 3.14-21. KNE SAN VICENTE–FAIRFAX ALIGNMENT PREDICTED VIBRATION LEVELS AT FTA CATEGORY 2 RESIDENTIAL LAND USES

CITY	RESIDENTIAL ADDRESS	PREDICTED GBV[1]	FTA GBV CRITERIA (VdB)	GBV EXCEEDANCE (Y/N)	PREDICTED GBN[2]	FTA GBN CRITERIA (dBA)	GBN EXCEEDANCE (Y/N)
Los Angeles	2300 S Victoria Ave	52	72	N	28	35	N
Los Angeles	2207 S Victoria Ave	50	72	N	23	35	N
Los Angeles	2026 Wellington Road	49	72	N	21	35	N
Los Angeles	1945 Wellington Road	49	72	N	21	35	N
Los Angeles	1864 Virginia Road	49	72	N	20	35	N
Los Angeles	1823 Virginia Road	49	72	N	20	35	N
Los Angeles	1734 Buckingham Road	49	72	N	21	35	N
Los Angeles	1675 Buckingham Road	49	72	N	21	35	N
Los Angeles	1616 West Blvd	49	72	N	21	35	N
Los Angeles	W 16th Place	50	72	N	22	35	N
Los Angeles	4777 San Vicente Blvd	50	72	N	22	35	N
Los Angeles	4821 San Vicente Blvd	51	72	N	26	35	N
Los Angeles	1299 S Highland Ave	50	72	N	23	35	N
Los Angeles	1301 S Highland Ave	50	72	N	22	35	N
Los Angeles	1300 S Mansfield Ave	53	72	N	30	35	N
Los Angeles	5111 San Vicente Blvd	49	72	N	21	35	N
Los Angeles	5104 San Vicente Blvd	49	72	N	21	35	N
Los Angeles	1248 Redondo Blvd	49	72	N	21	35	N
Los Angeles	1252 Redondo Blvd	49	72	N	20	35	N
Los Angeles	5253 San Vicente Blvd	49	72	N	21	35	N
Los Angeles	1255 Meadowbrook Ave	49	72	N	20	35	N
Los Angeles	5315 San Vicente Blvd	49	72	N	20	35	N
Los Angeles	5322 San Vicente Blvd	49	72	N	21	35	N
Los Angeles	5404 San Vicente Blvd	49	72	N	21	35	N

CITY	RESIDENTIAL ADDRESS	PREDICTED GBV[1]	FTA GBV CRITERIA (VdB)	GBV EXCEEDANCE (Y/N)	PREDICTED GBN[2]	FTA GBN CRITERIA (dBA)	GBN EXCEEDANCE (Y/N)
Los Angeles	5415 San Vicente Blvd	49	72	N	21	35	N
Los Angeles	5455 San Vicente Blvd	49	72	N	21	35	N
Los Angeles	5470 San Vicente Blvd	49	72	N	21	35	N
Los Angeles	1128 Masselin Ave	50	72	N	22	35	N
Los Angeles	1109 Masselin Ave	50	72	N	22	35	N
Los Angeles	1040 S Curson Ave	49	72	N	21	35	N
Los Angeles	1007 S Stanley Ave	49	72	N	21	35	N
Los Angeles	915 S Spaulding Ave	50	72	N	23	35	N
Los Angeles	847 S Genesee Ave	51	72	N	25	35	N
Los Angeles	754 S Orange Grove Ave	50	72	N	23	35	N
Los Angeles	530 S Fairfax Ave	60	72	N	32	35	N
Los Angeles	119 N Fairfax Ave	51	72	N	26	35	N
Los Angeles	140 N Hayworth Ave	52	72	N	28	35	N
Los Angeles	925 N Hayworth Ave	54	72	N	32	35	N
West Hollywood	8700 Bonner Drive	53	72	N	30	35	N
West Hollywood	354 N Sherbourne Drive	54	72	N	32	35	N
West Hollywood	404 N Sherbourne Drive	54	72	N	32	35	N
West Hollywood	8703 Ashcroft Avenue	54	72	N	32	35	N
West Hollywood	528 N San Vicente Blvd	54	72	N	32	35	N
West Hollywood	530 N San Vicente Blvd	50	72	N	23	35	N
West Hollywood	8755 Santa Monica Blvd	61	72	N	33	35	N

Source: Connect Los Angeles Partners 2023
Note: Vibration from the TBM would be at or below the levels predicted for train operations. Implementation of a vibration control plan and vibration monitoring as per PM NOI-1 would ensure station construction at the surface would not result in excessive GBV and GBN levels. Therefore, the levels and impacts shown in this table can be used for both construction and operations.
[1] As a safety factor, no building loss was assumed.
[2] A value of -5 dB can be used for K_{rad} for typical residential rooms.
dBA = A-weighted decibels; GBN = ground-borne noise; GBV = ground-borne vibration; K_{rad} = radiation factor; VdB = vibration decibels

TABLE 3.14-22. KNE SAN VICENTE–FAIRFAX ALIGNMENT PREDICTED VIBRATION LEVELS AT FTA CATEGORY 3 INSTITUTIONAL LAND USES

CITY	BUILDING ADDRESS	PREDICTED GBV[1]	FTA GBV CRITERIA (VdB)	GBV EXCEEDANCE (Y/N)	PREDICTED GBN[2]	FTA GBN CRITERIA (dBA)	GBN EXCEEDANCE (Y/N)
Los Angeles	West Angeles Church of God 3602 Crenshaw Blvd	49	75	N	20	40	N
Los Angeles	West Angeles Church of God 3045 Crenshaw Blvd	52	75	N	28	40	N
Los Angeles	West Angeles Christian Academy 3000 Crenshaw Blvd	53	75	N	30	40	N
Los Angeles	Complete Eye Care Center 2825 Crenshaw Blvd	57	75	N	33	40	N
Los Angeles	Neighborhood Office Commercial 5601 San Vicente Blvd	50	75	N	22	40	N
Los Angeles	Peterson Automotive Museum 6060 Wilshire Blvd	50	75	N	23	40	N
Los Angeles	Academy Museum of Motion Pictures 6067 Wilshire Blvd	49	75	N	21	40	N
Los Angeles	Hancock Park Elementary School 408 S Fairfax Ave	51	75	N	26	40	N
Los Angeles	Laurel Span School 925 N Hayworth Ave	50	75	N	23	40	N
Los Angeles	Short Story Hotel 15 S Fairfax Ave	57	75	N	33	40	N
Los Angeles	Modern Animal Hospital 8126 Beverly Blvd	51	75	N	26	40	N
Los Angeles	Sofitel Los Angeles at Beverly Hills 8555 Beverly Blvd	54	75	N	32	40	N
Los Angeles	Cedars-Sinai Medical Center 8700 Beverly Blvd	50	75	N	22	40	N
West Hollywood	West Hollywood Library 625 N San Vicente Blvd	53	75	N	30	40	N

CITY	BUILDING ADDRESS	PREDICTED GBV[1]	FTA GBV CRITERIA (VdB)	GBV EXCEEDANCE (Y/N)	PREDICTED GBN[2]	FTA GBN CRITERIA (dBA)	GBN EXCEEDANCE (Y/N)
West Hollywood	Ramada Plaza 8585 Santa Monica Blvd	51	75	N	26	40	N
West Hollywood	Avalon West Hollywood – Mixed Use/Multifamily, 7136 Santa Monica Blvd	52	75	N	28	40	N
West Hollywood	Domain – Mixed Use/Multifamily 7141 Santa Monica Blvd	53	75	N	30	40	N
West Hollywood	The Dylan – Mixed Use/Multifamily 7111 Santa Monica Blvd	53	75	N	30	40	N
Los Angeles	The Highland, 1411 N Highland Ave	52	75	N	28	40	N
Los Angeles	Modera Hollywood – Mixed Use/Multifamily 6775 Selma Ave	61	75	N	35	40	N
Los Angeles	1724 Highland Avenue – Mixed Use/Multifamily	59	75	N	31	40	N

Source: Connect Los Angeles Partners 2023
Note: Vibration from the TBM would be at or below the levels predicted for train operations. Implementation of a vibration control plan and vibration monitoring as per PM NOI-1 would ensure station construction at the surface would not result in excessive GBV and GBN levels. Therefore, the levels and impacts shown in this table can be used for both construction and operations.
[1] As a safety factor, no building loss was assumed.
[2] A value of -5 dB can be used for K_{rad} for typical residential rooms.
dBA = A-weighted decibels; GBN = ground-borne noise; GBV = ground-borne vibration; K_{rad} = radiation factor; VdB = vibration decibels

3.14.7.2.2 KNE FAIRFAX ALIGNMENT

3.14.7.2.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. During construction, GBV and GBN would be of concern primarily in the tunnel phase. As such, the study of potential GBV and GBN construction impacts focuses on the underground alignments. Potential GBV and GBN impacts could also occur in the early stages of the cut-and-cover alignment construction and during aboveground station construction activities, but this would depend on the method of construction that the contractor chooses to use.

The predicted GBV and GBN at sensitive receivers in the RSA above the underground portions of the KNE Fairfax Alignment are presented in Table 3.14-23 for FTA Special Buildings, Table 3.14-24 for FTA Category 2 residential land uses, and Table 3.14-25 for FTA Category 3 institutional land uses.[2] Project measure PM NOI-1 would be implemented to protect any Category 1 or 3 land uses, historic buildings, and historic non-building structures from damage during construction. Project measure PM NOI-2 would also be implemented to ensure that at a later stage of design, once a preferred alignment is selected, an FTA Detailed Vibration Assessment would be conducted to further analyze vibration impacts. As a result, the predicted GBV and GBN at sensitive receivers above the underground portions of the alignment would not exceed FTA impact criteria.

Construction of the tunnel would be mostly underground. Vibration from the tunnel boring machine would be at or below the levels predicted for light rail vehicle operations. Implementation of a vibration control plan and vibration monitoring as per project measure PM NOI-1 would ensure station construction at the surface would not result in excessive GBV and GBN levels. The vibration generated by the tunnel boring machine would be temporary, lasting for a few days as it passes under the different receiver locations. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.14.7.2.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE Fairfax Alignment would also occur primarily underground, which is the only potential source of GBV and GBN impacts from light rail vehicle operations. Light rail vehicles moving through the stations would be the concern for operational vibration impacts at the station locations. The only operational activity that would not be underground is people entering and exiting the station, which has no risk of GBV or GBN impacts. However, because borehole line source response testing was not conducted as part of this assessment, the theaters and performing arts spaces identified as FTA Special Buildings would require further study as part of final design.

While there are FTA Special Buildings, Category 2 residential land uses, and Category 3 institutional land uses in the KNE Fairfax Alignment RSA, as shown in Table 3.14-23, Table 3.14-24, and Table 3.14-25, the predicted GBV and GBN at sensitive receivers in the RSA would not exceed FTA impact criteria. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

[2] For this analysis, the Academy Museum of Motion Pictures is considered a Category 3 land use due to its usage as a movie theater.

TABLE 3.14-23. KNE FAIRFAX ALIGNMENT PREDICTED VIBRATION LEVELS AT FTA SPECIAL BUILDINGS

CITY	BUILDING ADDRESS	PREDICTED GBV[1]	FTA GBV CRITERIA (VdB)	GBV EXCEEDANCE (Y/N)	PREDICTED GBN[2]	FTA GBN CRITERIA (dBA)	GBN EXCEEDANCE (Y/N)
Los Angeles	West Angeles Performing Arts, 3020 Crenshaw Blvd	53	72	N	30	35	N
West Hollywood	Education/Lee Strasberg Theatre, 7936 Santa Monica Blvd	53	75	N	30	40	N
Los Angeles	Hollywood High School Theater, 1521 N Highland Ave	60	72	N	33	35	N

Source: Connect Los Angeles Partners 2023
Note: Vibration from the TBM would be at or below the levels predicted for train operations. Implementation of a vibration control plan and vibration monitoring as per PM NOI-1 would ensure station construction at the surface would not result in excessive GBV and GBN levels. Therefore, the levels and impacts shown in this table can be used for both construction and operations.
[1] As a safety factor, no building loss was assumed.
[2] A value of -5 dB can be used for K_{rad} for typical residential rooms.
dBA = A-weighted decibels; GBN = ground-borne noise; GBV = ground-borne vibration; K_{rad} = radiation factor; VdB = vibration decibels

TABLE 3.14-24. KNE FAIRFAX ALIGNMENT PREDICTED VIBRATION LEVELS AT FTA CATEGORY 2 RESIDENTIAL LAND USES

CITY	BUILDING ADDRESS	PREDICTED GBV[1]	FTA GBV CRITERIA (VdB)	GBV EXCEEDANCE (Y/N)	PREDICTED GBN[2]	FTA GBN CRITERIA (dBA)	GBN EXCEEDANCE (Y/N)
Los Angeles	2300 S Victoria Ave	52	72	N	28	35	N
Los Angeles	2207 S Victoria Ave	50	72	N	23	35	N
Los Angeles	2026 Wellington Road	49	72	N	21	35	N
Los Angeles	1945 Wellington Road	49	72	N	21	35	N
Los Angeles	1864 Virginia Road	49	72	N	20	35	N
Los Angeles	1823 Virginia Road	49	72	N	20	35	N
Los Angeles	1734 Buckingham Road	49	72	N	21	35	N
Los Angeles	1675 Buckingham Road	49	72	N	21	35	N
Los Angeles	1616 West Blvd	49	72	N	21	35	N
Los Angeles	W 16th Place	50	72	N	22	35	N
Los Angeles	4777 San Vicente Blvd	50	72	N	22	35	N
Los Angeles	4821 San Vicente Blvd	51	72	N	26	35	N
Los Angeles	1299 S Highland Ave	50	72	N	23	35	N
Los Angeles	1301 S Highland Ave	50	72	N	22	35	N
Los Angeles	1300 S Mansfield Ave	51	72	N	25	35	N
Los Angeles	5111 San Vicente Blvd	49	72	N	21	35	N
Los Angeles	5104 San Vicente Blvd	49	72	N	21	35	N
Los Angeles	1248 Redondo Blvd	49	72	N	21	35	N
Los Angeles	1252 Redondo Blvd	49	72	N	20	35	N
Los Angeles	5253 San Vicente Blvd	49	72	N	21	35	N
Los Angeles	1255 Meadowbrook Ave	49	72	N	20	35	N
Los Angeles	5315 San Vicente Blvd	49	72	N	21	35	N
Los Angeles	5322 San Vicente Blvd	49	72	N	21	35	N

CITY	BUILDING ADDRESS	PREDICTED GBV[1]	FTA GBV CRITERIA (VdB)	GBV EXCEEDANCE (Y/N)	PREDICTED GBN[2]	FTA GBN CRITERIA (dBA)	GBN EXCEEDANCE (Y/N)
Los Angeles	5404 San Vicente Blvd	49	72	N	21	35	N
Los Angeles	5415 San Vicente Blvd	49	72	N	21	35	N
Los Angeles	5455 San Vicente Blvd	49	72	N	21	35	N
Los Angeles	5470 San Vicente Blvd	49	72	N	20	35	N
Los Angeles	1128 Masselin Ave	50	72	N	22	35	N
Los Angeles	1109 Masselin Ave	50	72	N	22	35	N
Los Angeles	1040 S Curson Ave	50	72	N	22	35	N
Los Angeles	1255 Meadowbrook Ave	49	72	N	21	35	N
Los Angeles	1007 S Stanley Ave	49	72	N	21	35	N
Los Angeles	915 S Spaulding Ave	50	72	N	23	35	N
Los Angeles	847 S Genesee Ave	51	72	N	25	35	N
Los Angeles	754 S Orange Grove Ave	50	72	N	23	35	N
Los Angeles	530 S Fairfax Ave	60	72	N	32	35	N
Los Angeles	751 N Fairfax Ave	52	72	N	28	35	N
Los Angeles	812 N Hayworth Ave	53	72	N	30	35	N
Los Angeles	839 N Hayworth Ave	53	72	N	30	35	N
Los Angeles	925 N Hayworth Ave	54	72	N	32	35	N
Los Angeles	801 Romaine St	53	72	N	30	35	N
West Hollywood	105 N Edinburgh Ave	52	72	N	28	35	N

Source: Connect Los Angeles Partners 2023

Note: Vibration from the TBM would be at or below the levels predicted for train operations. Implementation of a vibration control plan and vibration monitoring as per PM NOI-1 would ensure station construction at the surface would not result in excessive GBV and GBN levels. Therefore, the levels and impacts shown in this table can be used for both construction and operations.

[1] As a safety factor, no building loss was assumed.

[2] A value of -5 dB can be used for K_{rad} for typical residential rooms.

dBA = A-weighted decibels; GBN = ground-borne noise; GBV = ground-borne vibration; K_{rad} = radiation factor; VdB = vibration decibels

TABLE 3.14-25. KNE FAIRFAX ALIGNMENT PREDICTED VIBRATION LEVELS AT FTA CATEGORY 3 INSTITUTIONAL LAND USES

CITY	BUILDING ADDRESS	PREDICTED GBV[1]	FTA GBV CRITERIA (VdB)	GBV EXCEEDANCE (Y/N)	PREDICTED GBN[2]	FTA GBN CRITERIA (dBA)	GBN EXCEEDANCE (Y/N)
Los Angeles	West Angeles Church of God 3602 Crenshaw Blvd	49	75	N	20	40	N
Los Angeles	West Angeles Church of God 3045 Crenshaw Blvd	52	75	N	28	40	N
Los Angeles	West Angeles Christian Academy 3000 Crenshaw Blvd	53	75	N	30	40	N
Los Angeles	Complete Eye Care Center 2825 Crenshaw Blvd	57	75	N	33	40	N
Los Angeles	Peterson Automotive Museum 6060 Wilshire Blvd	50	75	N	23	40	N
Los Angeles	Academy Museum of Motion Pictures 6067 Wilshire Blvd	49	75	N	21	40	N
Los Angeles	Hancock Park Elementary School, 408 S Fairfax Avenue	51	75	N	26	40	N
Los Angeles	Short Story Hotel 115 S Fairfax Avenue	57	75	N	33	40	N
Los Angeles	Baba Sale Congregation 404 N Fairfax Ave	52	75	N	28	40	N
Los Angeles	Greenway Court Theatre/Fairfax High School, 7850 Melrose Ave	52	75	N	28	40	N
Los Angeles	Fairfax High School 7850 Melrose Ave	48	75	N	19	40	N
Los Angeles	Laurel Span School 925 N Hayworth Ave	50	75	N	23	40	N
West Hollywood	Avalon West Hollywood – Mixed Use/Multifamily 7136 Santa Monica Blvd	52	75	N	28	40	N

CITY	BUILDING ADDRESS	PREDICTED GBV[1]	FTA GBV CRITERIA (VdB)	GBV EXCEEDANCE (Y/N)	PREDICTED GBN[2]	FTA GBN CRITERIA (dBA)	GBN EXCEEDANCE (Y/N)
West Hollywood	Domain – Mixed Use/Multifamily 7141 Santa Monica Blvd	53	75	N	30	40	N
West Hollywood	The Dylan – Mixed Use/Multifamily 7111 Santa Monica Blvd	53	75	N	30	40	N
Los Angeles	The Highland – Mixed Use/Multifamily 1411 N Highland Ave	52	75	N	28	40	N
Los Angeles	Modera Hollywood – Mixed Use/Multifamily 6775 Selma Ave	61	75	N	35	40	N
Los Angeles	1724 Highland Avenue – Mixed Use/Multifamily	59	75	N	31	40	N

Source: Connect Los Angeles Partners 2023
Note: Vibration from the TBM would be at or below the levels predicted for train operations. Implementation of a vibration control plan and vibration monitoring as per PM NOI-1 would ensure station construction at the surface would not result in excessive GBV and GBN levels. Therefore, the levels and impacts shown in this table can be used for both construction and operations.
[2] A value of -5 dB can be used for K_{rad} for typical residential rooms.
[3] As a safety factor, no building loss was assumed.
dBA = A-weighted decibels; GBN = ground-borne noise; GBV = ground-borne vibration; K_{rad} = radiation factor; VdB = vibration decibels

3.14.7.2.3 KNE LA BREA ALIGNMENT

3.14.7.2.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. During construction, GBV and GBN would be of concern primarily in the tunnel phase. As such, the study of potential GBV and GBN construction impacts focuses on the underground alignments. Potential GBV and GBN impacts could also occur in the early stages of the cut-and-cover alignment construction and during aboveground station construction activities, but this would depend on the method of construction that the contractor chooses to use.

The predicted GBV and GBN at sensitive receivers in the RSA above the underground portions of the KNE La Brea Alignment are presented in Table 3.14-26 for FTA Special Buildings, Table 3.14-27 for FTA Category 2 residential land uses, and Table 3.14-28 for FTA Category 3 institutional land uses. Project measure PM NOI-1 would be implemented to protect any Category 1 or 3 land uses, historic buildings, and historic non-building structures from damage during construction. Project measure PM NOI-2 would also be implemented to ensure that at a later stage of design, once a preferred alignment is selected, an FTA Detailed Vibration Assessment would be conducted to further analyze vibration impacts. As a result, the predicted GBV and GBN at sensitive receivers above the underground portions of the alignment would not exceed FTA impact criteria.

Construction of the tunnel would be mostly underground. Vibration from the tunnel boring machine would be at or below the levels predicted for light rail vehicle operations. Implementation of a vibration control plan and vibration monitoring as per project measure PM NOI-1 would ensure station construction at the surface would not result in excessive GBV and GBN levels. The vibration generated by the tunnel boring machine would be temporary, lasting for a few days as it passes under the different receiver locations. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.14.7.2.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE La Brea Alignment would also occur primarily underground, which is the only potential source of GBV and GBN impacts from light rail vehicle operations. Light rail vehicles moving through the stations would be the concern for operational vibration impacts at the station locations. The only operational activity that would not be underground is people entering and exiting the station, which has no risk of GBV or GBN impacts. However, because borehole line source response testing was not conducted as part of this assessment, the theaters and performing arts spaces identified as FTA Special Buildings would require further study as part of final design.

While there are FTA Special Buildings, Category 2 residential land uses, and Category 3 institutional land uses in the KNE La Brea Alignment RSA, as shown in Table 3.14-26, Table 3.14-27, and Table 3.14-28, the predicted GBV and GBN at sensitive receivers in the RSA would not exceed FTA impact criteria. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

TABLE 3.14-26. KNE LA BREA ALIGNMENT PREDICTED VIBRATION LEVELS AT FTA SPECIAL BUILDINGS

CITY	BUILDING ADDRESS	PREDICTED GBV[1]	FTA GBV CRITERIA (VdB)	GBV EXCEEDANCE (Y/N)	PREDICTED GBN[2]	FTA GBN CRITERIA (dBA)	GBN EXCEEDANCE (Y/N)
Los Angeles	West Angeles Performing Arts Theatre 3020 Crenshaw Blvd	53	72	N	30	35	N
Los Angeles	Hollywood High School Theater 1521 N Highland Ave	60	72	N	33	35	N

Source: Connect Los Angeles Partners 2023
Note: Vibration from the TBM would be at or below the levels predicted for train operations. Implementation of a vibration control plan and vibration monitoring as per PM NOI-1 would ensure station construction at the surface would not result in excessive GBV and GBN levels. Therefore, the levels and impacts shown in this table can be used for both construction and operations.
[1] As a safety factor, no building loss was assumed.
[2] A value of -5 dB can be used for K_{rad} for typical residential rooms.
dBA = A-weighted decibels; GBN = ground-borne noise; GBV = ground-borne vibration; K_{rad} = radiation factor; VdB = vibration decibels

TABLE 3.14-27. KNE LA BREA ALIGNMENT PREDICTED VIBRATION LEVELS AT FTA CATEGORY 2 RESIDENTIAL LAND USES

CITY	BUILDING ADDRESS	PREDICTED GBV[1]	FTA GBV CRITERIA (VdB)	GBV EXCEEDANCE (Y/N)	PREDICTED GBN[2]	FTA GBN CRITERIA (dBA)	GBN EXCEEDANCE (Y/N)
Los Angeles	2300 S Victoria Ave	52	72	N	28	35	N
Los Angeles	2207 S Victoria Ave	50	72	N	23	35	N
Los Angeles	2026 Wellington Road	49	72	N	21	35	N
Los Angeles	1945 Wellington Road	49	72	N	20	35	N
Los Angeles	1864 Virginia Road	49	72	N	20	35	N
Los Angeles	1823 Virginia Road	49	72	N	20	35	N
Los Angeles	1734 Buckingham Road	49	72	N	21	35	N
Los Angeles	1675 Buckingham Road	49	72	N	21	35	N
Los Angeles	1616 West Blvd	50	72	N	22	35	N
Los Angeles	W 16th Place	50	72	N	22	35	N

CITY	BUILDING ADDRESS	PREDICTED GBV[1]	FTA GBV CRITERIA (VdB)	GBV EXCEEDANCE (Y/N)	PREDICTED GBN[2]	FTA GBN CRITERIA (dBA)	GBN EXCEEDANCE (Y/N)
Los Angeles	4777 San Vicente Blvd	50	72	N	23	35	N
Los Angeles	4821 San Vicente Blvd	51	72	N	26	35	N
Los Angeles	1299 S Highland Ave	50	72	N	23	35	N
Los Angeles	1301 S Highland Ave	50	72	N	22	35	N
Los Angeles	1264 S Orange Drive	50	72	N	23	35	N
Los Angeles	1249 S Orange Drive	50	72	N	22	35	N
Los Angeles	1214 S Sycamore Ave	50	72	N	23	35	N
Los Angeles	1112 S Redondo Blvd	50	72	N	23	35	N
Los Angeles	1059 Redondo Blvd	50	72	N	23	35	N
West Hollywood	1234 N La Brea Ave	52	72	N	28	35	N
West Hollywood	1255 N Sycamore Ave	51	72	N	26	35	N
Los Angeles	1306 N Sycamore Ave	51	72	N	26	35	N
Los Angeles	1327 N Mansfield Ave	52	72	N	28	35	N
Los Angeles	1343 N Citrus Ave	52	72	N	28	35	N
Los Angeles	1352 N Citrus Ave	53	72	N	30	35	N

Source: Connect Los Angeles Partners 2023
Note: Vibration from the TBM would be at or below the levels predicted for train operations. Implementation of a vibration control plan and vibration monitoring as per PM NOI-1 would ensure station construction at the surface would not result in excessive GBV and GBN levels. Therefore, the levels and impacts shown in this table can be used for both construction and operations.
[1] As a safety factor, no building loss was assumed.
[2] A value of -5 dB can be used for K_{rad} for typical residential rooms.
dBA = A-weighted decibels; GBN = ground-borne noise; GBV = ground-borne vibration; K_{rad} = radiation factor; VdB = vibration decibels

TABLE 3.14-28. KNE LA BREA ALIGNMENT PREDICTED VIBRATION LEVELS AT FTA CATEGORY 3 INSTITUTIONAL LAND USES

CITY	BUILDING ADDRESS	PREDICTED GBV[1]	FTA GBV CRITERIA (VdB)	GBV EXCEEDANCE (Y/N)	PREDICTED GBN[2]	FTA GBN CRITERIA (dBA)	GBN EXCEEDANCE (Y/N)
Los Angeles	West Angeles Church of God 3602 Crenshaw Blvd	49	75	N	20	40	N
Los Angeles	West Angeles Church of God 3045 Crenshaw Blvd	51	75	N	26	40	N
Los Angeles	West Angeles Christian Academy 3000 Crenshaw Blvd	53	75	N	30	40	N
Los Angeles	Complete Eye Care Center 2825 Crenshaw Blvd	57	75	N	33	40	N
Los Angeles	Cathedral Chapel of St Vibiana 923 S La Brea Ave	50	75	N	22	40	N
Los Angeles	Iglesia Cristiana Leon De Juda 847 S La Bera Ave	50	75	N	23	40	N
Los Angeles	Wilshire La Brea, 5200 Wilshire Blvd	60	75	N	33	40	N
Los Angeles	La Brea Compassionate Caregivers 735 S La Brea	55	75	N	28	40	N
Los Angeles	La Art, 217 S La Brea Ave	50	75	N	23	40	N
Los Angeles	Education, 132 S La Brea Ave	52	75	N	28	40	N
Los Angeles	Bnos Esther, 116 N La Brea Ave	52	75	N	28	40	N
Los Angeles	UCLA Health MPTF 335 N La Brea Ave	57	75	N	33	40	N
Los Angeles	Education, 330 N La Brea Ave	52	75	N	28	40	N
Los Angeles	Congregation Levi Yitzchok 356 N La Brea Ave	62	75	N	38	40	N
Los Angeles	The Rehabilitation Center 501 N La Brea Ave	51	75	N	26	40	N

CITY	BUILDING ADDRESS	PREDICTED GBV[1]	FTA GBV CRITERIA (VdB)	GBV EXCEEDANCE (Y/N)	PREDICTED GBN[2]	FTA GBN CRITERIA (dBA)	GBN EXCEEDANCE (Y/N)
Los Angeles	Yeshiva Rav Isacsohn 540 N La Brea Ave	51	75	N	26	40	N
Los Angeles	Yeshiva Rav Isacsohn 555 N La Brea Ave	51	75	N	25	40	N
Los Angeles	The Hole, 844 N La Brea Ave	52	75	N	28	40	N
Los Angeles	Angelene WeHo 915 N La Brea Ave	51	75	N	26	40	N
Los Angeles	Prizmal, 904 N La Brea Ave	51	75	N	26	40	N
West Hollywood	The Dylan 7111 Santa Monica Blvd	51	75	N	26	40	N
West Hollywood	1145 N La Brea Ave	51	75	N	26	40	N
West Hollywood	Hollywood Cat and Dog Hospital 1150 N La Brea Ave	51	75	N	25	40	N
West Hollywood	Congregation Kol Ami 1200 N La Brea Ave	52	75	N	28	40	N
Los Angeles	The Highland 1411 N Highland Ave – Mixed Use/Multifamily	53	75	N	30	40	N
Los Angeles	Modera Hollywood 6775 Selma Ave – Mixed Use/Multifamily	64	75	N	30	40	N
Los Angeles	1724 Highland – Mixed Use/Multifamily	59	75	N	31	40	N

Source: Connect Los Angeles Partners 2023
Note: Vibration from the TBM would be at or below the levels predicted for train operations. Implementation of a vibration control plan and vibration monitoring as per PM NOI-1 would ensure station construction at the surface would not result in excessive GBV and GBN levels. Therefore, the levels and impacts shown in this table can be used for both construction and operations.
[1] As a safety factor, no building loss was assumed.
[2] A value of -5 dB can be used for K_{rad} for typical residential rooms.
dBA = A-weighted decibels; GBN = ground-borne noise; GBV = ground-borne vibration; K_{rad} = radiation factor; VdB = vibration decibels

3.14.7.2.4 HOLLYWOOD BOWL DESIGN OPTION

3.14.7.2.4.1 CONSTRUCTION IMPACTS

No Impact. During construction, GBV and GBN would be of concern primarily in the tunnel phase. As such, the study of potential GBV and GBN construction impacts focuses on the underground alignments. Potential GBV and GBN impacts could also occur in the early stages of the cut-and-cover alignment construction and during aboveground station construction activities, but this would depend on the method of construction that the contractor chooses to use.

The predicted GBV and GBN at sensitive receivers in the RSA above the underground portions of the Hollywood Bowl Design Option are presented in Table 3.14-29 for FTA Category 2 residential land uses. There are no FTA Special Buildings or FTA Category 3 institutional land uses in the design option RSA. As shown in the table, none of the FTA GBV and GBN impact criteria would be exceeded at the identified land uses.

Construction of the tunnel would be mostly underground. Vibration from construction activities associated with the sequential excavation method would be at or below the levels predicted for light rail vehicle operations. Implementation of a vibration control plan and vibration monitoring as per project measure PM NOI-1 would ensure station construction at the surface would not result in excessive GBV and GBN levels. The vibration generated by the sequential excavation method would be temporary, lasting for a few days as it passes under the different receiver locations. Therefore, the Hollywood Bowl Design Option would have no impact during construction.

3.14.7.2.4.2 OPERATIONAL IMPACTS

No Impact. Operation of the Hollywood Bowl Design Option would also occur primarily underground, which is the only potential source of GBV and GBN impacts from light rail vehicle operations. Light rail vehicles moving through the stations would be the concern for operational vibration impacts at the station locations. The only operational activity that would not be underground is people entering and exiting the station, which has no risk of GBV or GBN impacts.

The predicted GBV and GBN at sensitive receivers in the RSA above the Hollywood Bowl Design Option are presented in Table 3.14-29. There are no FTA Special Buildings or FTA Category 3 institutional land uses in the RSA. As shown in the table, none of the FTA GBV and GBN impact criteria would be exceeded during operation of the design option. Therefore, the Hollywood Bowl Design Option would have no impact during operation.

TABLE 3.14-29. HOLLYWOOD BOWL DESIGN OPTION PREDICTED VIBRATION LEVELS AT FTA CATEGORY 2 RESIDENTIAL LAND USES

CITY	BUILDING ADDRESS	PREDICTED GBV[1]	FTA GBV CRITERIA (VdB)	GBV EXCEEDANCE (Y/N)	PREDICTED GBN[2]	FTA GBN CRITERIA (dBA)	GBN EXCEEDANCE (Y/N)
Los Angeles	1921 N Highland Ave	52	72	N	28	35	N
Los Angeles	1940 N Highland Ave	53	72	N	30	35	N

Source: Connect Los Angeles Partners 2023
Note: Vibration from sequential excavation method would be at or below the levels predicted for train operations. Implementation of a vibration control plan and vibration monitoring as per PM NOI-1 would ensure station construction at the surface would not result in excessive GBV and GBN levels. Therefore, the levels and impacts shown in this table can be used for both construction and operations.
[1] As a safety factor, no building loss was assumed.
[2] A value of -5 dB can be used for K_{rad} for typical residential rooms.
dBA = A-weighted decibels; GBN = ground-borne noise; GBV = ground-borne vibration; K_{rad} = radiation factor; VdB = vibration decibels

3.14.7.2.5 MAINTENANCE AND STORAGE FACILITY

3.14.7.2.5.1 CONSTRUCTION IMPACTS

No Impact. Construction of the MSF would require construction equipment and movement of soil. The nearest vibration-sensitive land use to the MSF is more than 200 feet from the MSF. At that distance, vibration levels would not exceed FTA GBV and GBN impact criteria. Therefore, the MSF would have no impact during construction.

3.14.7.2.5.2 OPERATIONAL IMPACTS

No Impact. Operational activities at the MSF would involve the movement of light rail vehicles. There would also be special trackwork in the yard to allow the light rail vehicles to be moved between storage tracks. The nearest vibration-sensitive land use to the MSF is more than 200 feet from the MSF. At that distance, vibration levels would not exceed FTA GBV and GBN impact criteria. Therefore, the MSF would have no impact during operation.

3.14.7.3 IMPACT NOI-3: AIRPORT NOISE

Impact NOI-3: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

3.14.7.3.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.14.7.3.1.1 CONSTRUCTION IMPACTS

No Impact. The KNE San Vicente–Fairfax Alignment would not be located within two miles of a private airstrip, airport land use plan, or public airport. The closest airport or airstrip is the Santa Monica Airport, located 5.4 miles southwest of the alignment. LAX is located six miles from the southern extent of the alignment. Construction of the KNE San Vicente–Fairfax Alignment would not expose people residing or working in the RSA to excessive noise levels. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during construction.

3.14.7.3.1.2 OPERATIONAL IMPACTS

No Impact. The KNE San Vicente–Fairfax Alignment would not be located within two miles of a private airstrip, airport land use plan, or public airport. The closest airport or airstrip is the Santa Monica Airport, located 5.4 miles southwest of the alignment. LAX is located six miles from the southern extent of the alignment. Operation of the KNE San Vicente–Fairfax Alignment would not expose people residing or working in the RSA to excessive noise levels. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during operation.

3.14.7.3.2 KNE FAIRFAX ALIGNMENT

3.14.7.3.2.1 CONSTRUCTION IMPACTS

No Impact. The KNE Fairfax Alignment would not be located within two miles of a private airstrip, airport land use plan, or public airport. The closest airport or airstrip is the Santa Monica Airport, located 5.5 miles southwest of the alignment. LAX is located six miles from the southern extent of the alignment. Construction of the KNE Fairfax Alignment would not expose people residing or working in the RSA to excessive noise levels. Therefore, the KNE Fairfax Alignment would have no impact during construction.

3.14.7.3.2.2 OPERATIONAL IMPACTS

No Impact. The KNE Fairfax Alignment would not be located within two miles of a private airstrip, airport land use plan, or public airport. The closest airport or airstrip is the Santa Monica Airport, located 5.5 miles southwest of the alignment. LAX is located six miles from the southern extent of the alignment. Operation of the KNE Fairfax Alignment would not expose people residing or working in the RSA to excessive noise levels. Therefore, the KNE Fairfax Alignment would have no impact during operation.

3.14.7.3.3 KNE LA BREA ALIGNMENT

3.14.7.3.3.1 CONSTRUCTION IMPACTS

No Impact. The KNE La Brea Alignment would not be located within two miles of a private airstrip, airport land use plan, or public airport. The closest airport or airstrip is the Santa Monica Airport, located 6 miles southwest of the alignment. LAX is located six miles from the southern extent of the alignment. Construction of the KNE La Brea Alignment would not expose people residing or working in the RSA to excessive noise levels. Therefore, the KNE La Brea Alignment would have no impact during construction.

3.14.7.3.3.2 OPERATIONAL IMPACTS

No Impact. The KNE La Brea Alignment would not be located within two miles of a private airstrip, airport land use plan, or public airport. The closest airport or airstrip is the Santa Monica Airport, located 6 miles southwest of the alignment. LAX is located six miles from the southern extent of the alignment. Operation of the KNE La Brea Alignment would not expose people residing or working in the RSA to excessive noise levels. Therefore, the KNE La Brea Alignment would have no impact during operation.

3.14.7.3.4 HOLLYWOOD BOWL DESIGN OPTION

3.14.7.3.4.1 CONSTRUCTION IMPACTS

No Impact. The Hollywood Bowl Design Option would not be located within two miles of a private airstrip, airport land use plan, or public airport. The closest airport or airstrip is the Hollywood Burbank Airport, located 5.8 miles northeast of the design option, and LAX is located 12 miles away. Construction of the design option would not expose people residing or working in the RSA to excessive noise levels. Therefore, the Hollywood Bowl Design Option would have no impact during construction.

3.14.7.3.4.2 OPERATIONAL IMPACTS

No Impact. The Hollywood Bowl Design Option would not be located within two miles of a private airstrip, airport land use plan, or public airport. The closest airport or airstrip is the Hollywood Burbank Airport, located 5.8 miles northeast of the design option, and LAX is located 12 miles away. Operation of the design option would not expose people residing or working in the RSA to excessive noise levels. Therefore, the Hollywood Bowl Design Option would have no impact during operation.

3.14.7.3.5 MAINTENANCE AND STORAGE FACILITY

3.14.7.3.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The MSF site is within 0.5 mile of LAX. Construction of the MSF could expose people residing and working in the area to new noise sources, but because the area is located in the 65 to 70 community noise equivalent level contour for the aircraft landing path at LAX, noise from construction and operational activities associated with the MSF would add only 1 to 2 decibels to the current high noise levels in the surrounding area and would not expose people residing or working in the RSA to excessive noise levels. Therefore, the MSF would have a less than significant impact during construction.

3.14.7.3.5.2 OPERATION IMPACTS

Less than Significant Impact. The MSF site is within 0.5 mile of LAX. Operation of the MSF could expose people residing and working in the area to new noise sources, but because the area is located in the 65 to 70 community noise equivalent level contour for the aircraft landing path at LAX, noise from construction and operational activities associated with the MSF would add only 1 to 2 decibels to the current high noise levels in the surrounding area and would not expose people residing or working in the RSA to excessive noise levels. Therefore, the MSF would have a less than significant impact during operation.

3.14.7.4 MITIGATION MEASURES

The mitigation measure described below is provided to reduce significant noise and vibration impacts. Section 3.14.7.4.2 discusses the impact significance after mitigation.

3.14.7.4.1 MITIGATION MEASURE MM NOI-1: NOISE CONTROL PLAN

Prior to the initiation of construction activities, Metro's contractor shall conduct an ambient noise study and develop a Noise Control Plan demonstrating how the FTA 1-hour L_{eq} noise criteria would be achieved during construction. The Noise Control Plan shall be prepared by a board-certified acoustical engineer and would be designed to follow Metro requirements and would include measurements of existing noise, a list of the major pieces of construction equipment that would be used, and predictions of the noise levels at the closest noise-sensitive receivers (i.e., residences, hotels, schools, churches, temples, and similar facilities). The Noise Control Plan shall be approved by Metro prior to initiating construction. Where construction cannot be performed in accordance with the FTA 1-hour L_{eq} construction noise standards, the contractor

would investigate alternative construction measures that would result in lower sound levels. The applicable FTA 1-hour L_{eq} construction noise standards, as set forth in the FTA Design Manual, are as follows:

- Residential daytime standard of 90 dBA L_{eq} and nighttime standard of 80 dBA L_{eq}
- Commercial and industrial daytime standard of 100 dBA L_{eq} and nighttime standard of 100 dBA L_{eq}

The contractor shall conduct noise monitoring to demonstrate compliance with contract noise limits. The contractor shall establish a public information compliant system and contractor shall respond to and provide corrective action for noise-related complaints filed within a time period of 24-hours. In addition, Metro would comply with local noise ordinances when applicable (e.g., noise standards in City of Los Angeles Municipal Code Section 41.40 and the ambient noise level increase limit of 5 dBA in the LA City CEQA Threshold Guidelines), including by obtaining a variance(s) from the applicable local jurisdiction when nighttime work is required. Noise-reducing methods that may be implemented by Metro include:

- If nighttime construction is planned, a noise variance may be obtained by the contractor, if required by the jurisdiction, that demonstrates the implementation of control measures to maintain noise levels below the applicable FTA standards.
- Where construction occurs near noise-sensitive land uses, specialty equipment with enclosed engines, acoustically attenuating shields, and/or high-performance mufflers may be used.
- Limit unnecessary idling of equipment.
- Install temporary noise barriers or noise-control curtains, where feasible and desirable.
- Reroute construction-related truck traffic away from local residential streets and/or sensitive receivers.
- Limit impact pile driving where feasible and effective or use pre-auger pile insertion.
- Use electric instead of diesel-powered equipment and hydraulic instead of pneumatic tools where feasible.
- Minimize the use of impact devices such as jackhammers and hoe rams, using concrete crushers and pavement saws instead.

3.14.7.4.2 IMPACT SIGNIFICANCE AFTER MITIGATION

As described in Section 3.14.7.1, there would be significant impacts related to substantial temporary increases in ambient noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies (Impact NOI-1) during construction of stations associated with the KNE San Vicente–Fairfax Alignment, KNE Fairfax Alignment, KNE La Brea Alignment, and the Hollywood Bowl Design Option. The subsections below describe the impact significance for each of the alignments and the design option after implementation of mitigation.

3.14.7.4.2.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

IMPACT NOI-1: AMBIENT NOISE

For the KNE San Vicente–Fairfax Alignment, MM NOI-1 (Noise Control Plan) shall be implemented at the following eight station locations where there would be a significant impact during construction:

- Crenshaw/Adams Station
- Wilshire/Fairfax Station
- Fairfax/3rd Station
- La Cienega/Beverly Station
- San Vicente/Santa Monica Station
- Fairfax/Santa Monica Station
- La Brea/Santa Monica Station
- Hollywood/Highland Station

This mitigation measure focuses on the areas and activities relevant to aboveground construction. During construction at the Wilshire/Fairfax Station, Metro may also need to engage in additional coordination with the Academy Museum of Motion Pictures. This would allow the contractor to schedule construction so activities with greater noise or vibration levels do not occur during events at the Academy Museum of Motion Pictures.

Implementation of mitigation measure MM NOI-1 during construction of the KNE San Vicente–Fairfax Alignment would reduce increases in ambient noise to a less than significant level.

3.14.7.4.2.2 KNE FAIRFAX ALIGNMENT

IMPACT NOI-1: AMBIENT NOISE

For the KNE Fairfax Alignment, MM NOI-1 (Noise Control Plan) shall be implemented at the following six station locations where there would be a significant impact during construction:

- Crenshaw/Adams Station
- Wilshire/Fairfax Station
- Fairfax/3rd Station
- Fairfax/Santa Monica Station
- La Brea/Santa Monica Station
- Hollywood/Highland Station

This mitigation measure focuses on the areas and activities relevant to aboveground construction. During construction at the Wilshire/Fairfax Station, Metro may also need to engage in additional coordination with the Academy Museum of Motion Pictures. This would allow the contractor to schedule construction

so activities with greater noise or vibration levels do not occur during events at the Academy Museum of Motion Pictures.

Implementation of mitigation measure MM NOI-1 during construction of the KNE Fairfax Alignment would reduce increases in ambient noise to a less than significant level.

3.14.7.4.2.3 KNE LA BREA ALIGNMENT

IMPACT NOI-1: AMBIENT NOISE

For the KNE La Brea Alignment, MM NOI-1 (Noise Control Plan) shall be implemented at the following five station locations where there would be a significant impact during construction:

- Crenshaw/Adams Station
- Wilshire/La Brea Station
- La Brea/Beverly Station
- La Brea/Santa Monica Station
- Hollywood/Highland Station

This mitigation measure focuses on the areas and activities relevant to aboveground construction. Implementation of mitigation measure MM NOI-1 during construction of the KNE La Brea Alignment would reduce increases in ambient noise to a less than significant level.

3.14.7.4.2.4 HOLLYWOOD BOWL DESIGN OPTION

IMPACT NOI-1: AMBIENT NOISE

For the Hollywood Bowl Design Option, MM NOI-1 (Noise Control Plan) shall be implemented at the following station location where there would be a significant impact during construction:

- Hollywood Bowl Station

This mitigation measure focuses on the areas and activities relevant to aboveground construction. Implementation of mitigation measure MM NOI-1 during construction of the Hollywood Bowl Design Option would reduce increases in ambient noise to a less than significant level.

3.14.7.5 SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

Table 3.14-30 summarizes the noise and vibration impact significance conclusions and applicable mitigation measures.

TABLE 3.14-30. KNE SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

IMPACT		IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES				
		KNE SAN VICENTE–FAIRFAX ALIGNMENT	KNE FAIRFAX ALIGNMENT	KNE LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MAINTENANCE AND STORAGE FACILITY
Impact NOI-1: Ambient Noise	Impact Before Mitigation	Construction: Significant[1] Operation: No Impact	Construction: Significant[2] Operation: No Impact	Construction: Significant[3] Operation: No Impact	Construction: Significant Operation: No Impact	Construction: No Impact Operation: No Impact
	Mitigation Measures	Construction: MM NOI-1 Operation: None Required	Construction: MM NOI-1 Operation: None Required	Construction: MM NOI-1 Operation: None Required	Construction: MM NOI-1 Operation: None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: No Impact	Construction: LTS Operation: No Impact	Construction: LTS Operation: No Impact	Construction: LTS Operation: No Impact	Construction: No Impact Operation: No Impact
Impact NOI-2: Ground-Borne Noise and Vibration	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact
Impact NOI-3: Airport Noise	Impact Before Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: LTS Operation: LTS

Source: Connect Los Angeles Partners 2024

[1] For the KNE San Vicente–Fairfax Alignment, significant impacts would occur at Crenshaw/Adams, Wilshire/Fairfax, Fairfax/3rd, La Cienega/Beverly, San Vicente/Santa Monica, Fairfax/Santa Monica, La Brea/Santa Monica, and Hollywood/Highland Stations, and mitigation would be required. There would be a less than significant impact at the Midtown Crossing Station.

[2] For the KNE Fairfax Alignment, significant impacts would occur at Crenshaw/Adams, Wilshire/Fairfax, Fairfax/3rd, Fairfax/Santa Monica, La Brea/Santa Monica, and Hollywood/Highland Stations, and mitigation would be required. There would be a less than significant impact at the Midtown Crossing Station.

[3] For the KNE La Brea Alignment, significant impacts would occur at Crenshaw/Adams, Wilshire/La Brea, La Brea/Santa Monica, and Hollywood/Highland Stations, and mitigation would be required. There would be a less than significant impact at the Midtown Crossing Station.

LTS = less than significant impact

3.15 PUBLIC SERVICES AND RECREATION

3.15.1 INTRODUCTION

This discussion provides an evaluation of K Line Northern Extension (KNE) as it relates to public services and recreational facilities. It includes descriptions of the federal, state, and local regulatory setting, existing conditions, and the impacts from construction and operation of the proposed alignments and stations, design option, and maintenance and storage facility (MSF), as well as mitigation measures where applicable. For more detailed information, refer to the KNE Public Services and Recreation Technical Report (Appendix 3.15-A).

3.15.2 REGULATORY FRAMEWORK

3.15.2.1 FEDERAL

The following federal laws and regulations are relevant to construction and operation of the project:

- Land and Water Conservation Fund Act of 1965
- Uniform Fire Code

3.15.2.2 STATE

The following state laws and regulations are relevant to construction and operation of the project:

- California Public Park Preservation Act of 1971

3.15.2.3 REGIONAL

No regional regulations are applicable to the project regarding public services and recreational facilities.

3.15.2.4 LOCAL

The general plans for the City of Los Angeles and City of West Hollywood contain goals, objectives, and policies that guide long-term growth in the respective cities. Specific elements of the general plans related to parks, safety, and infrastructure are relevant to public services and recreation. These policies include preserving and enhancing public parks, open spaces, and recreational facilities for community use; monitoring school service demand and improving the quality of educational facilities; and maintaining adequate police, fire, and emergency medical service levels for the public safety needs of every neighborhood.

3.15.3 METHODOLOGY

3.15.3.1 CEQA METHODOLOGY

This analysis evaluates the project against California Environmental Quality Act (CEQA) thresholds of significance as the basis for determining the level of impacts related to public services and recreational facilities.

3.15.3.2 SIGNIFICANCE THRESHOLDS

In accordance with Appendix G of the 2022 CEQA Guidelines, the project would have a significant impact related to public services and recreational facilities if it would:

- Impact PUB-1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for any of following the public services:
  - Fire protection
  - Police protection
  - Schools
  - Parks
  - Other public facilities
- Impact PUB-2: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
- Impact PUB-3: Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

3.15.4 RESOURCE STUDY AREA

The resource study area (RSA) for the public services and recreational facilities analysis is delineated as 100 feet from each side of the underground tunnel portions of the alignments and design option and a 0.25-mile radius around the stations and the MSF.

3.15.5 EXISTING SETTING

This existing setting discussion summarizes current conditions related to public services and recreational facilities within and near the KNE RSA.

3.15.5.1 REGIONAL SETTING

KNE is located within several jurisdictions, including the Cities of Los Angeles and West Hollywood, in Los Angeles County. The analysis below presents information on existing parklands and recreational facilities, community facilities, and public service facilities within the identified RSAs for the alignments and stations, the design option, and the MSF.

3.15.5.1.1 PARKLANDS AND RECREATIONAL FACILITIES

Within the RSA, there are 10 parkland and recreation facilities, totaling approximately 43 acres, and two public entertainment venues, the Hollywood Bowl and Ford Theatre, totaling approximately 102 acres. Each identified parkland is owned and managed by local government jurisdictions. No national parks, state parks, or wildlife refuges are located within the RSA. Table 3.15-1 and Figure 3.15-1 identify the parklands and recreational facilities within the 100-foot alignment RSA and the 0.25-mile station RSA. Parks and recreational facilities closest to KNE are West Hollywood Park (KNE San Vicente–Fairfax Alignment) and Plummer Park (KNE San Vicente–Fairfax and Fairfax Alignments).

TABLE 3.15-1. PARKLANDS AND RECREATIONAL FACILITIES WITHIN KNE RESOURCE STUDY AREAS

MAP ID[1]	NAME	SIZE (ACRES)	JURISDICTION	KNE ALIGNMENT RSA
1	Eleanor Green Roberts Aquatic Center	0.7	LADRP	San Vicente–Fairfax, Fairfax, La Brea
2	Hancock Park	23	LADRP, Los Angeles County	San Vicente–Fairfax, Fairfax
3	West Hollywood Park	5.3	LADRP	San Vicente–Fairfax
4	West Hollywood Aquatic and Recreation Center	1.0	WHRS	San Vicente–Fairfax
5	Plummer Park	7.3	WHRS	San Vicente–Fairfax, Fairfax
6	Formosa Park	0.1	WHRS	San Vicente–Fairfax, Fairfax, La Brea
7	De Longpre Park	1.5	LADRP	San Vicente–Fairfax, Fairfax, La Brea
8	Dorothy J. and Benjamin B. Smith Park	0.5	LADRP	San Vicente–Fairfax, Fairfax, La Brea
9	Highland Camrose Park	2.1	LA County	Hollywood Bowl Design Option
10	Yucca Community Center	1.0	LADRP	San Vicente–Fairfax, Fairfax, La Brea
11	Hollywood Bowl	69.7	Los Angeles County, LA Philharmonic	Hollywood Bowl Design Option
12	The Ford Theatre	32.0	Los Angeles County	Hollywood Bowl Design Option

Source: City of Los Angeles GeoHub, datasets: recreation and parks and recreation centers; Google Maps 2023
[1] Map identification numbers correspond to Figure 3.15-1.
LADRP = City of Los Angeles Department of Recreation and Parks; RSA = resource study area; WHRS = City of West Hollywood Recreational Services

FIGURE 3.15-1. PARKLANDS AND RECREATIONAL FACILITIES WITHIN KNE RESOURCE STUDY AREA

Source: City of Los Angeles GeoHub, datasets: recreation and parks and recreation centers; Google Maps 2023

3.15.5.1.1.1 ALIGNMENTS AND STATIONS

KNE SAN VICENTE–FAIRFAX ALIGNMENT

The KNE San Vicente–Fairfax Alignment has nine parks and recreational facilities within the 100-foot alignment RSA and 0.25-mile station RSA, as shown in Table 3.15-1 and depicted on Figure 3.15-1. The parks and recreational facilities include Eleanor Green Roberts Aquatic Center, Hancock Park, West Hollywood Park, West Hollywood Aquatic and Recreation Center, Plummer Park, Formosa Park, De Longpre Park, Dorothy J. and Benjamin B. Smith Park, and Yucca Community Center.

KNE FAIRFAX ALIGNMENT

The KNE Fairfax Alignment has seven parks and recreational facilities within the 100-foot alignment RSA and 0.25-mile station RSA, as shown in Table 3.15-1 and depicted on Figure 3.15-1. The parks and recreational facilities include Eleanor Green Roberts Aquatic Center, Hancock Park, Plummer Park, Formosa Park, De Longpre Park, Dorothy J. and Benjamin B. Smith Park, and Yucca Community Center.

KNE LA BREA ALIGNMENT

The KNE La Brea Alignment has five parks and recreational facilities within the 100-foot alignment RSA and 0.25-mile station RSA, as shown in Table 3.15-1 and depicted on Figure 3.15-1. The parks and recreational facilities include Eleanor Green Roberts Aquatic Center, Hancock Park, De Longpre Park, Dorothy J. and Benjamin B. Smith Park, and Yucca Community Center.

3.15.5.1.1.2 HOLLYWOOD BOWL DESIGN OPTION

The Hollywood Bowl Design Option has three parks and recreational facilities within the 100-foot alignment RSA and 0.25-mile station RSA, as shown in Table 3.15-1 and depicted on Figure 3.15-1. The parks and recreational facilities include the Hollywood Bowl, Highland Camrose Park, and Ford Amphitheater.

3.15.5.1.1.3 MAINTENANCE AND STORAGE FACILITY

There are no parklands or recreational facilities located within the 0.25-mile MSF RSA.

3.15.5.1.2 MUNICIPAL FACILITIES

Municipal facilities identified within the RSAs for the KNE San Vicente–Fairfax, Fairfax, and La Brea Alignments include municipal buildings and courthouses, fire stations, police stations, and libraries. Table 3.15-2 and Figure 3.15-2 show the municipal facilities identified within the 100-foot alignment RSA and 0.25-mile station RSA. The municipal facilities closest to KNE are the West Hollywood Sheriff's Station and Los Angeles County Library – West Hollywood Library (KNE San Vicente–Fairfax Alignment) and Los Angeles County Fire Department (LACFD) – Station 8 (KNE San Vicente–Fairfax and Fairfax Alignments).

TABLE 3.15-2. MUNICIPAL FACILITIES WITHIN KNE RESOURCE STUDY AREAS

MAP ID[1]	NAME	ADDRESS	JURISDICTION	KNE ALIGNMENT RSA
MUNICIPAL BUILDINGS AND COURTHOUSES				
1	West Hollywood City Hall	8300 Santa Monica Blvd	City of West Hollywood	San Vicente–Fairfax
FIRE STATIONS				
2	LACFD – Station 8	7643 Santa Monica Blvd	LACFD	San Vicente–Fairfax, Fairfax
3	LACFD – Station 7 (Battalion 1 Headquarters)	864 N San Vicente Blvd	LACFD	San Vicente–Fairfax
POLICE STATIONS				
4	Wilshire Community Police Station	4861 W Venice Blvd	LAPD	San Vicente–Fairfax, Fairfax, La Brea
5	West Hollywood Sheriff's Station	780 N San Vicente Blvd	Los Angeles County Sheriff	San Vicente–Fairfax
LIBRARIES				
6	Los Angeles County Library – West Hollywood Library	625 N San Vicente Blvd	Los Angeles County	San Vicente–Fairfax

Source: City of Los Angeles GeoHub, datasets: courthouses, city halls, LAPD police stations, sheriff and police stations, fire stations, and libraries.
[1] Map identification numbers correspond to Figure 3.15-2.
LACFD = Los Angeles County Fire Department; LAPD = Los Angeles Police Department; RSA = resource study area

3.15.5.1.2.1 ALIGNMENTS AND STATIONS

KNE SAN VICENTE–FAIRFAX ALIGNMENT

The KNE San Vicente–Fairfax Alignment has six municipal facilities within the 100-foot alignment RSA and 0.25-mile station RSA, as shown in Table 3.15-2 and depicted on Figure 3.15-2. The municipal facilities include West Hollywood City Hall, LACFD – Station 8, LACFD – Station 7 (Battalion 1 Headquarters), Wilshire Community Police Station, West Hollywood Sheriff's Station, and Los Angeles County Library – West Hollywood Library.

KNE FAIRFAX ALIGNMENT

The KNE Fairfax Alignment has two municipal facilities within the 100-foot alignment RSA and 0.25-mile station RSA, as shown in Table 3.15-2 and depicted on Figure 3.15-2. The municipal facilities include LACFD – Station 8 and the Wilshire Community Police Station.

KNE LA BREA ALIGNMENT

The KNE La Brea Alignment has one municipal facilities within the 100-foot alignment RSA and 0.25-mile station RSA, as shown in Table 3.15-2 and depicted on Figure 3.15-2. The municipal facility is the Wilshire Community Police Station at 4861 W Venice Boulevard.

FIGURE 3.15-2. MUNICIPAL FACILITIES WITHIN KNE RESOURCE STUDY AREAS

Source: City of Los Angeles GeoHub 2023 datasets: courthouses, city halls, LAPD police stations, sheriff and police stations, fire stations, and libraries

3.15.5.1.2.2 HOLLYWOOD BOWL DESIGN OPTION

There are no municipal facilities located within the 100-foot alignment RSA or 0.25-mile station RSA of the Hollywood Bowl Design Option.

3.15.5.1.2.3 MAINTENANCE AND STORAGE FACILITY

There are no municipal facilities located within the 0.25-mile MSF RSA.

3.15.5.1.3 EMERGENCY SERVICE PROVIDERS

Emergency services for fire and police protection within the RSAs for the KNE San Vicente–Fairfax, Fairfax, and La Brea Alignments are provided by LACFD, Los Angeles County Sheriff's Department, Los Angeles Fire Department (LAFD), and Los Angeles Police Department (LAPD). Table 3.15-3 shows the police and fire department service areas.

TABLE 3.15-3. POLICE AND FIRE DEPARTMENT SERVICE AREA DETAILS

NAME	STATION/MSF RSA
FIRE PROTECTION	
Los Angeles Fire Department Battalion 5	La Brea/Santa Monica, Hollywood/Highland, Hollywood Bowl
Los Angeles Fire Department Battalion 18	Expo/Crenshaw, Crenshaw/Adams, Midtown Crossing, Wilshire/Fairfax, Wilshire/La Brea, Fairfax/3rd, La Cienega/Beverly, La Brea/Beverly
Los Angeles Fire Department Battalion 4	MSF
LACFD Battalion 1	San Vicente/Santa Monica, Fairfax/Santa Monica, La Brea/Santa Monica
LACFD Battalion 20	MSF
POLICE PROTECTION	
LAPD – Southwest Division	Expo/Crenshaw, Crenshaw/Adams
LAPD – Wilshire Division	Midtown Crossing, Wilshire/Fairfax, Wilshire/La Brea, Fairfax/3rd, La Cienega/Beverly, La Brea/Beverly
LAPD – Hollywood Division	La Brea/Santa Monica, Hollywood/Highland, Hollywood Bowl
LAPD – Pacific Division	MSF
West Hollywood Sheriff	San Vicente/Santa Monica, Fairfax/Santa Monica, La Brea/Santa Monica
Inglewood Police Department	MSF

Source: Los Angeles County Fire Department; Los Angeles County Sheriff's Department; Los Angeles Fire Department; Los Angeles Police Department, 2023
LACFD = Los Angeles County Fire Department; LAFD = Los Angels Fire Department; LAPD = Los Angeles Police Department; MSF = maintenance and storage facility; RSA = resource study area

3.15.5.1.3.1 ALIGNMENTS AND STATIONS

KNE SAN VICENTE–FAIRFAX ALIGNMENT

The KNE San Vicente–Fairfax Alignment RSA is served by LAFD Battalions 5 and 18; LAPD Southwest, Wilshire, and Hollywood Divisions; and the West Hollywood Sheriff.

KNE FAIRFAX ALIGNMENT

The KNE Fairfax Alignment RSA is served by LAFD Battalions 5 and 18; LAPD Southwest, Wilshire, and Hollywood Divisions; and the West Hollywood Sheriff.

KNE LA BREA ALIGNMENT

The KNE La Brea Alignment RSA is served by LAFD Battalions 5 and 18; LACFD Battalion 1; LAPD Southwest, Wilshire, and Hollywood Divisions; and the West Hollywood Sheriff.

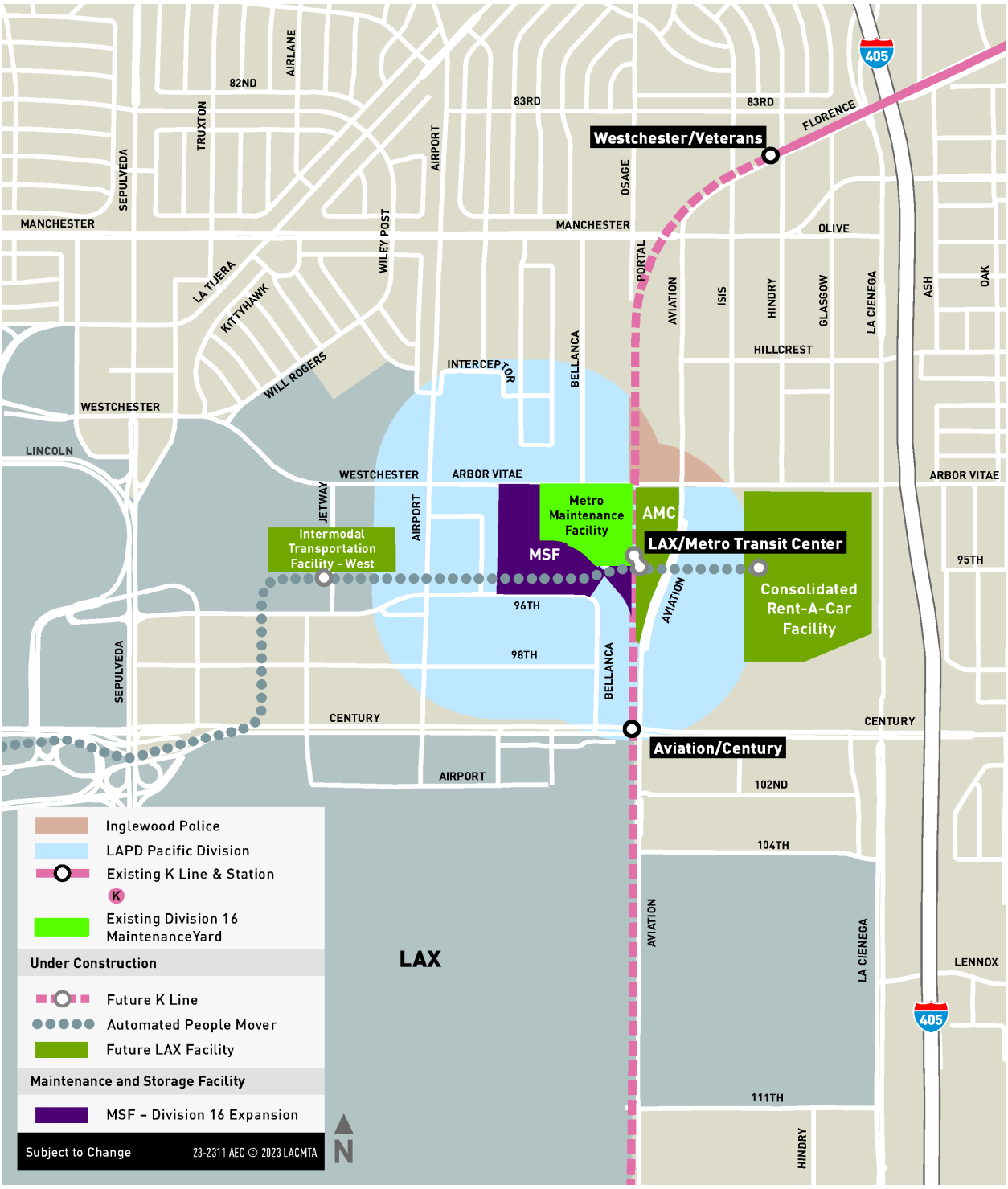
3.15.5.1.3.2 HOLLYWOOD BOWL DESIGN OPTION

The Hollywood Bowl Design Option RSA is served by LAFD Battalion 5 and LAPD Hollywood Division.

3.15.5.1.3.3 MAINTENANCE AND STORAGE FACILITY

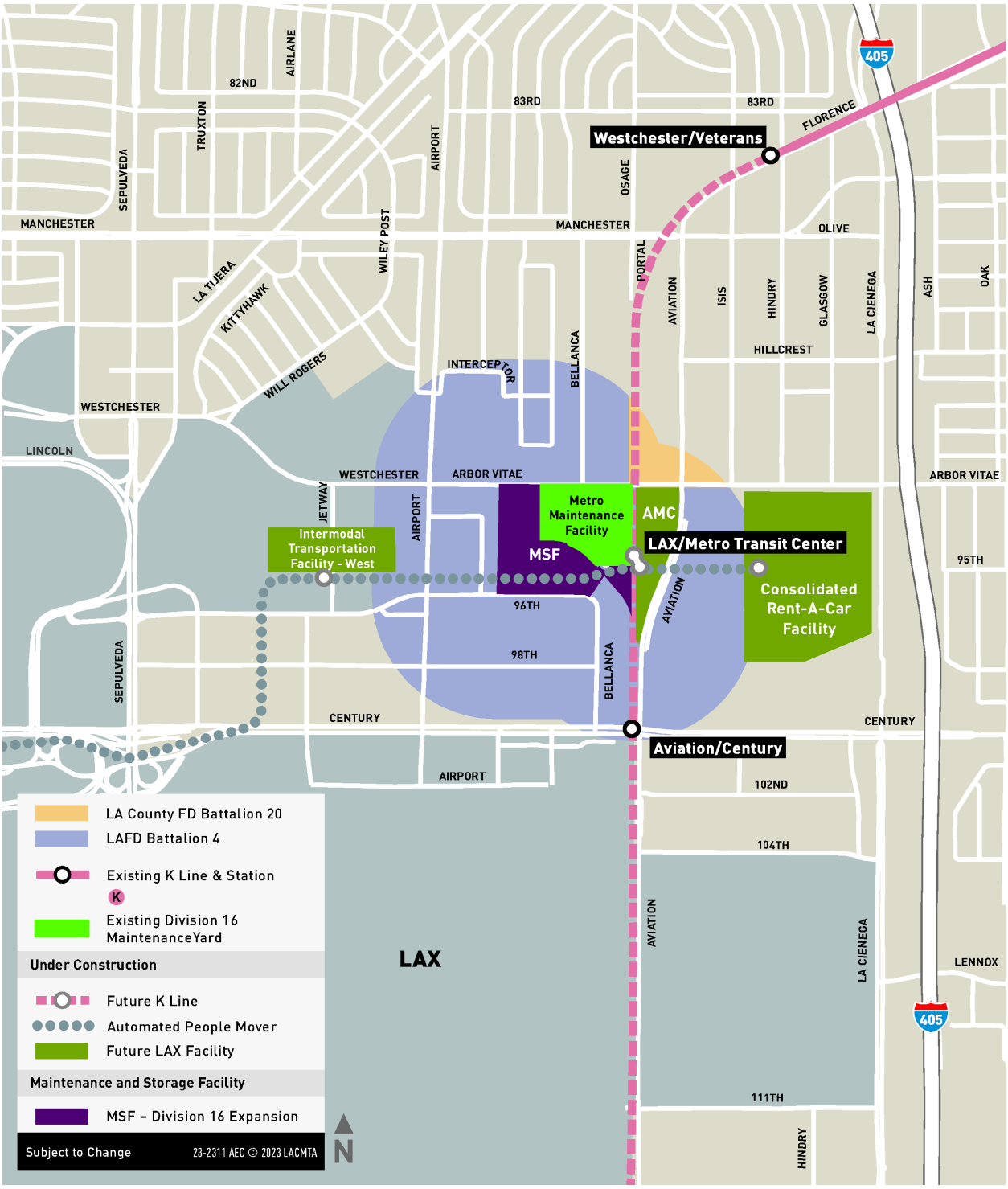
As shown in Figure 3.15-3 and Figure 3.15-4, the majority of the MSF RSA is served by the LAPD Pacific Division and LAFD Battalion 4. The northeast portion of the MSF RSA is located in the City of Inglewood and served by the Inglewood Police Department and LACFD Battalion 20 (City of Inglewood 2023; LACFD 2021).

FIGURE 3.15-3. POLICE FACILITIES WITHIN MSF RESOURCE STUDY AREA



Source: Los Angeles County Sheriff's Department 2023; Los Angeles Police Department 2023

FIGURE 3.15-4. FIRE FACILITIES WITHIN MSF RESOURCE STUDY AREA



Source: Los Angeles County Fire Department 2023

3.15.5.1.4 EDUCATIONAL FACILITIES

Educational facilities identified within the 100-foot alignment RSA of the KNE alignments and 0.25-mile station RSAs for the KNE San Vicente–Fairfax, Fairfax, and La Brea Alignments include 10 public and 11 private schools, which are identified in Table 3.15-4 and Figure 3.15-5.

TABLE 3.15-4. EDUCATIONAL FACILITIES WITHIN KNE RESOURCE STUDY AREAS

MAP ID[1]	NAME	ADDRESS	JURISDICTION/ PRIVATE SCHOOL TYPE	KNE ALIGNMENT RSA
PUBLIC SCHOOLS				
1	Virginia Road Elementary School	2925 Virginia Road	LAUSD	San Vicente–Fairfax, Fairfax, La Brea
2	Wilshire Crest Elementary School	5241 W Olympic Blvd	LAUSD	La Brea
3	Hancock Park Elementary School	408 S Fairfax Ave	LAUSD	San Vicente–Fairfax, Fairfax
4	West Hollywood Elementary School	970 N Hammond St	LAUSD	San Vicente–Fairfax
5	Fairfax High School	7850 Melrose Ave	LAUSD	Fairfax
6	Laurel Early Education Center	8023 Willoughby Ave	LAUSD	San Vicente–Fairfax, Fairfax
7	Laurel Cinematic Arts & Creative Technologies Magnet	925 N Hayworth Ave	LAUSD	San Vicente–Fairfax, Fairfax
8	Larchmont Charter School	1265 N Fairfax Ave	LAUSD	San Vicente–Fairfax, Fairfax
9	Selma Avenue Elementary School	6611 Selma Ave	LAUSD	San Vicente–Fairfax, Fairfax, La Brea
10	Hollywood High School	1521 N Highland Ave	LAUSD	San Vicente–Fairfax, Fairfax, La Brea
PRIVATE SCHOOLS				
11	Montessori Academy of West Adams	4449 W Adams Blvd	Private School	San Vicente–Fairfax, Fairfax, La Brea
12	Machon LA	5870 W Olympic Blvd	Religious School	San Vicente–Fairfax, Fairfax
13	Shalhevet High School	910 S Fairfax Ave	Religious School	San Vicente–Fairfax, Fairfax
14	Gindi Maimonides Academy	8511 Beverly Pl	Religious School	San Vicente–Fairfax
15	ABC Little School	927 N Fairfax Ave	Private School	San Vicente–Fairfax, Fairfax
16	Cathedral Chapel School	755 S Cochran Ave	Religious School	La Brea
17	Ohr Eliyahu Academy (Yeshiva Aharon Yaakov Ohr Eliyahu)	241 S Detroit St	Religious School	La Brea
18	Cheder of Los Angeles	801 N La Brea Ave	Religious School	La Brea
19	Yeshiva Rav Isacsohn/Toras Emes Academy	540 N La Brea Ave	Religious School	La Brea
20	Fountain Day School	1128 N Orange Grove Ave	Private School	San Vicente–Fairfax, Fairfax
21	The Oaks School	6817 Franklin Ave	Private School	San Vicente–Fairfax, Fairfax, La Brea, Hollywood Bowl Design Option

Source: City of Los Angeles GeoHub, datasets: schools LAUSD and Los Angeles private schools; Google Maps 2023
[1] Map identification numbers correspond to Figure 3.15-5.
LAUSD = Los Angeles Unified School District; RSA = resource study area

FIGURE 3.15-5. EDUCATIONAL FACILITIES WITHIN KNE RESOURCE STUDY AREAS

Source: City of Los Angeles GeoHub, datasets: schools LAUSD and Los Angeles private schools; Google Maps 2023

3.15.5.1.4.1 ALIGNMENTS AND STATIONS

KNE SAN VICENTE–FAIRFAX ALIGNMENT

The KNE San Vicente–Fairfax Alignment has 15 educational facilities within the 100-foot alignment RSA and 0.25-mile station RSA, as shown in Table 3.15-4 and depicted on Figure 3.15-5. The public educational facilities include Virginia Road Elementary School, Hancock Park Elementary School, West Hollywood Elementary School, Laurel Early Education Center, Laurel Cinematic Arts & Creative Technologies Magnet, Larchmont Charter School, Selma Avenue Elementary School, and Hollywood High School. The private educational facilities include Montessori Academy of West Adams, Machon LA, Shalhevet High School, Gindi Maimonides Academy, ABC Little School, Fountain Day School, and The Oaks School.

KNE FAIRFAX ALIGNMENT

The KNE Fairfax Alignment has 14 educational facilities within the 100-foot alignment RSA and 0.25-mile station RSA, as shown in Table 3.15-4 and depicted on Figure 3.15-5. The public educational facilities include Virginia Road Elementary School, Hancock Park Elementary School, Fairfax High School, Laurel Early Education Center, Laurel Cinematic Arts & Creative Technologies Magnet, Larchmont Charter School, Selma Avenue Elementary School, and Hollywood High School. The private educational facilities include Montessori Academy of West Adams, Machon LA, Shalhevet High School, ABC Little School, Fountain Day School, and The Oaks School.

KNE LA BREA ALIGNMENT

The KNE La Brea Alignment has 10 educational facilities within the 100-foot alignment RSA and 0.25-mile station RSA, as shown in Table 3.15-4 and depicted on Figure 3.15-5. The public educational facilities include Virginia Road Elementary School, Wilshire Crest Elementary School, Selma Avenue Elementary School, and Hollywood High School. The private educational facilities include Montessori Academy of West Adams, Cathedral Chapel School, Ohr Eliyahu Academy (Yeshiva Aharon Yaakov Ohr Eliyahu), Cheder of Los Angeles, Yeshiva Rav Isacsohn/Toras Emes Academy, and The Oaks School.

3.15.5.1.4.2 HOLLYWOOD BOWL DESIGN OPTION

The Hollywood Bowl Design Option has one educational facility within the 100-foot alignment RSA and 0.25-mile station RSA: The Oaks School at 6817 Franklin Avenue.

3.15.5.1.4.3 MAINTENANCE AND STORAGE FACILITY

There are no educational facilities located within the 0.25-mile MSF RSA.

3.15.5.1.5 HOSPITALS/MEDICAL CENTERS AND CHILDREN'S/FAMILY SERVICES

Hospitals/medical centers and children's/family services facilities identified within the KNE San Vicente–Fairfax, Fairfax, and La Brea Alignments RSAs include one hospital and one children's/family services facility. Table 3.15-5 and Figure 3.15-6 identify the hospital and children's/family services facility within the 100-foot alignment RSA of the KNE alignments and 0.25-mile station RSA.

TABLE 3.15-5. HOSPITALS/MEDICAL CENTERS AND CHILDREN'S/FAMILY SERVICES WITHIN KNE RESOURCE STUDY AREAS

MAP ID[1]	NAME	ADDRESS	KNE ALIGNMENT RSA
HOSPITALS AND MEDICAL CENTERS			
1	Cedars-Sinai Medical Center	8700 Beverly Blvd	San Vicente–Fairfax
CHILDREN'S AND FAMILY SERVICES			
2	Saban Community Clinic	8405 Beverly Blvd	San Vicente–Fairfax

Source: City of Los Angeles GeoHub, datasets: hospitals and medical centers, childcare, and children and family services
[1] Map identification numbers correspond to Figure 3.15-6.
RSA = resource study area

3.15.5.1.5.1 ALIGNMENTS AND STATIONS

KNE SAN VICENTE–FAIRFAX ALIGNMENT

The KNE San Vicente–Fairfax Alignment has one hospital/medical center and one children's/family services facility within the 100-foot alignment RSA and 0.25-mile station RSA, as shown in Table 3.15-5 and depicted on Figure 3.15-6. The hospital/medical center is the Cedars-Sinai Medical Center and the children's/family services facility is the Saban Community Clinic.

KNE FAIRFAX ALIGNMENT

There are no hospitals/medical centers or children's/family services facilities within the KNE Fairfax Alignment RSA.

KNE LA BREA ALIGNMENT

There are no hospitals/medical centers or children's/family services facilities within the KNE La Brea Alignment RSA.

3.15.5.1.5.2 HOLLYWOOD BOWL DESIGN OPTION

There are no hospitals/medical centers or children's/family services facilities within the Hollywood Bowl Design Option RSA.

3.15.5.1.5.3 MAINTENANCE AND STORAGE FACILITY

There are no hospitals/medical centers or children's/family services facilities within the 0.25-mile MSF RSA.

FIGURE 3.15-6. HOSPITALS/MEDICAL CENTERS AND CHILDREN'S/FAMILY SERVICES WITHIN KNE RESOURCE STUDY AREAS

Source: City of Los Angeles GeoHub, datasets: hospitals and medical centers, childcare, and children and family services 2023

3.15.5.1.6 SENIOR CENTERS AND SENIOR SERVICES

Senior centers and senior services identified within the RSAs for the KNE San Vicente–Fairfax, Fairfax, and La Brea Alignments include three senior centers and two senior services facilities. Table 3.15-6 and Figure 3.15-7 identify the senior centers and senior services within the 100-foot alignment RSA of the KNE alignments and 0.25-mile station RSA. The senior centers and senior services closest to KNE are the Westside Jewish Community Center (KNE San Vicente–Fairfax, Fairfax, and La Brea Alignments) and the West Hollywood Senior Center (KNE San Vicente–Fairfax and Fairfax Alignments).

TABLE 3.15-6. SENIOR CENTERS AND SENIOR SERVICES WITHIN KNE RESOURCE STUDY AREAS

MAP ID[1]	NAME	ADDRESS	KNE ALIGNMENT RSA
SENIOR CENTERS			
1	Las Palmas Senior Citizen Center	1820 N Las Palmas Ave	San Vicente–Fairfax, Fairfax, La Brea
2	Westside Jewish Community Center	5870 W Olympic Blvd	San Vicente–Fairfax, Fairfax
3	West Hollywood Senior Center	7377 Santa Monica Blvd	San Vicente–Fairfax, Fairfax
SENIOR SERVICES			
4	Jewish Family Service of Los Angeles – Multipurpose Senior Services Program	330 N Fairfax Ave	San Vicente–Fairfax, Fairfax
5	Jewish Family Service of Los Angeles – Senior Nutrition Program – West Knoll Apartments	838 W Knoll Dr	San Vicente–Fairfax, Fairfax

Source: City of Los Angeles GeoHub, datasets: senior services and senior centers and meal sites
[1] Map identification numbers correspond to Figure 3.15-7.
RSA = resource study area

FIGURE 3.15-7. SENIOR CENTERS AND SENIOR SERVICES NEAR KNE

Source: City of Los Angeles GeoHub, datasets: senior services and senior centers and meal sites 2023

3.15.5.1.6.1 ALIGNMENTS AND STATIONS

KNE SAN VICENTE–FAIRFAX ALIGNMENT

The KNE San Vicente–Fairfax Alignment has three senior centers and two senior services facilities within the 100-foot alignment RSA and 0.25-mile station RSA, as shown in Table 3.15-6 and depicted on Figure 3.15-7. The senior centers include the Las Palmas Senior Citizen Center, Westside Jewish Community Center, and West Hollywood Senior Center. The senior services facilities include the Jewish Family Service of Los Angeles – Multipurpose Senior Services Program and Jewish Family Service of Los Angeles – Senior Nutrition Program – West Knoll Apartments.

KNE FAIRFAX ALIGNMENT

The senior centers and services facilities within the KNE Fairfax Alignment RSA are the same as the KNE San Vicente–Fairfax Alignment.

KNE LA BREA ALIGNMENT

The KNE La Brea Alignment has one senior center within the 100-foot alignment RSA and 0.25-mile station RSA, as shown in Table 3.15-6 and depicted on Figure 3.15-7. The senior center in the RSA is the Las Palmas Senior Citizen Center at 1820 N Las Palmas Avenue.

3.15.5.1.6.2 HOLLYWOOD BOWL DESIGN OPTION

There are no senior centers or senior services facilities within the 100-foot alignment RSA and 0.25-mile station RSA for the Hollywood Bowl Design Option.

3.15.5.1.6.3 MAINTENANCE AND STORAGE FACILITY

There are no senior centers or senior services facilities within the 0.25-mile station MSF RSA.

3.15.6 PROJECT MEASURES

Project measures are design features, best management practices, or other commitments that Metro would implement as part of all proposed alignments, the design option, and the MSF to reduce or avoid environmental effects associated with project construction and operation. Project measures are not the same as mitigation measures, which are used to reduce an environmental impact's significance level. Where applicable, project measures are also discussed in Section 3.15.7 as part of the evaluation of environmental impacts.

3.15.6.1 PM TRA-2: CONSTRUCTION BEST MANAGEMENT PRACTICES (TRANSPORTATION)

Transportation BMPs during construction of the alignments, the design option, and the MSF shall include the following:

- Cooperation with the corridor cities and the California Department of Transportation 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 alignments, the design option, and the MSF shall be maintained during construction.
- Construction activities shall comply with the U.S. Occupational Safety and Health Administration (OSHA), California OSHA, and Metro safety and security programs.
- Safety for pedestrians, bicyclists, and motorists shall be maintained during construction using signage, partial lane closures, construction barriers, and supervision by safety and security personnel at access points and throughout construction sites.
- Metro shall prepare a Traffic Management Plan (TMP) in coordination with Caltrans, cities, and local fire and police departments prior to initiating construction activities that include the following:
  - Standard practices shall be followed that include scheduling of lane and/or road closures to minimize disruptions.
  - Detour plans shall be prepared for any streets requiring a full closure to provide safe alternate routes to vehicular traffic, pedestrians, and bicyclists during these closures.
  - Traffic control plans shall be prepared to route vehicles, bicyclists, and pedestrians around any partial closures of streets, bicycle facilities, and sidewalks.
  - Information on bus stop relocation and modification to bus routes, as applicable, shall be provided. Signs shall be posted to inform transit users in advance of street closures.
  - Construction timings and street closure information shall be available to the public through media alerts, the project's website, and changeable message signs.
  - The nearest local first responders shall be notified, as appropriate, of traffic control measures in the TMP during construction to coordinate emergency response routing.
  - The delivery and pick up of construction material during non-peak travel periods shall be scheduled to the extent possible to reduce the potential of conflicts between construction trucks and commuter traffic.
  - Coordination shall occur with other construction projects in the vicinity.
- 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, California OSHA, California Public Utilities Commission, California Manual on Uniform Traffic Control Devices, and Metro safety and security programs and standards (i.e., Metro Rail Design Criteria and Metro Systemwide Station Design Standards Policy). The construction TMP will be prepared in compliance with these standards.

- Financial assistance may be provided to small businesses along the proposed alignments, the design option, and the MSF that are directly affected by construction activities through grants to cover certain fixed operating expenses such as utilities, rent or mortgage, and insurance.
- Metro shall coordinate with the Hollywood Bowl to maintain circulation and access to the Hollywood Bowl during construction of the optional Hollywood Bowl Station.

3.15.7 IMPACT EVALUATION AND MITIGATION MEASURES

This analysis presents the construction and operational impacts for public services and recreational facilities, as well as any applicable mitigation measures associated with KNE. A summary of the impact conclusions and applicable mitigation measures is found in Table 3.15-7 in Section 3.15.7.5.

3.15.7.1 IMPACT PUB-1: PUBLIC FACILITIES

Impact PUB-1: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

- Fire protection
- Police protection
- Schools
- Parks
- Other public facilities

3.15.7.1.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.15.7.1.1.1 CONSTRUCTION IMPACTS

Significant Impact. Construction activities associated with the KNE San Vicente–Fairfax Alignment would require property acquisition and construction easements. No schools or parks would be temporarily or permanently acquired. Construction of the San Vicente/Santa Monica Station would require the full acquisition of the Los Angeles County Sheriff's Department West Hollywood Station for a construction staging and tunnel boring machine (TBM) launch site. No other land from fire stations, schools, parks, or hospitals would be required for construction of the San Vicente–Fairfax Alignment.

Pedestrian and bicycle access routes would be temporarily disrupted during construction (bicycle and pedestrian effects are discussed in Section 3.17, Transportation). To reduce potential effects of construction traffic and lane closures on emergency response times, Metro would coordinate with service providers for information on upcoming traffic conditions to allow for response planning. These requirements would be included in the TMP, as discussed in project measure PM TRA-2.

Off-street parking used by parkland, recreational facility, and community facility visitors may be temporarily removed for the duration of construction, which would require users to find alternative

parking. However, access to parklands and community facilities during construction would be maintained as practicable; construction detour route signage would be provided; and appropriate signage, barriers, and fencing for pedestrian and bicycle detour routes would be posted to prevent pedestrians and bicyclists from entering the construction zones, as identified in the TMP under project measure PM TRA-2. Construction activities would be temporary; therefore, construction of the alignment would not result in permanent impacts to parklands, recreation facilities, community facilities, and bicycle facilities that would require the need for new facilities.

As described above, construction of the alignment would require full acquisition of the Los Angeles County Sheriff's Department West Hollywood Station. Therefore, the KNE San Vicente–Fairfax Alignment would have a significant impact during construction, and mitigation would be required.

3.15.7.1.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE San Vicente–Fairfax Alignment would not require surface land acquisition from any park, school, recreational, or governmental facilities beyond the acquisition of the Los Angeles County Sheriff's Department West Hollywood Station identified above as a construction impact. Operation would not create or increase the residential population of the surrounding communities in a way that would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities because it does not include a housing component. Instead, accessibility to parklands, recreational facilities, and governmental facilities may be improved by having a nearby transit station.

Operation of the alignment would create a new transit line that would require security, including support from local police and fire departments. Metro provides Metro-employed and Metro-contracted security staff for transit vehicles and facilities. Metro is evaluating additional options to address safety and security on Metro systems, including potentially forming its own transit police force. While operation of the alignment would require an increase in Metro security staff and would place some additional demand on other police services, the new demands are expected to be accommodated with current resources and would not significantly affect the ability of public service providers to maintain acceptable service ratios, response times, or other performance objectives. Operation of the alignment would not generate new residential populations greater than what is anticipated in the Southern California Association of Governments' regional growth projections, which would not result in the need for new public recreational facilities or increase the use of existing parks or government facilities. With the additional transit access provided by KNE, there would be opportunity to increase access to better accommodate demand for parks and recreational facilities.

As described above, operation of the alignment would not affect the functionality of fire protection, schools, parks, or other public facilities. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.15.7.1.2 KNE FAIRFAX ALIGNMENT

3.15.7.1.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction activities associated with the KNE Fairfax Alignment would require property acquisition and construction easements. Property acquisition would be generally limited to properties currently zoned for commercial or industrial uses, and no residential uses, schools, or parks would be temporarily or permanently acquired. The property acquisition for construction under the KNE Fairfax Alignment would not include land from fire stations, police stations, schools, parks, or other public facilities that would affect public services.

Pedestrian and bicycle access routes would be temporarily disrupted during construction (bicycle and pedestrian effects are discussed in Section 3.17, Transportation). To reduce potential effects of construction traffic and lane closures on emergency response times, Metro would coordinate with service providers for information on upcoming traffic conditions to allow for response planning. These requirements would be included in the TMP, as discussed in project measure PM TRA-2.

Off-street parking used by parkland, recreational facility, and community facility visitors may be temporarily removed for the duration of construction, which would require users to find alternative parking. However, access to parklands and community facilities during construction would be maintained as practicable; construction detour route signage would be provided; and appropriate signage, barriers, and fencing for pedestrian and bicycle detour routes would be posted to prevent pedestrians and bicyclists from entering the construction zones, as identified in the TMP under project measure PM TRA-2. Construction activities would be temporary; therefore, construction of the alignment would not result in permanent impacts to parklands, recreation facilities, community facilities, and bicycle facilities that would require the need for new facilities.

As described above, construction of the alignment would not have substantial adverse physical impacts associated with new or physically altered governmental facilities needed to maintain acceptable public services. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.15.7.1.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE Fairfax Alignment would not require surface land acquisition from any park, school, recreational, or governmental facilities. Any subterranean easements would not affect the operation of surface park, recreational, or government facilities. Operation would not create or increase the residential population of the surrounding communities in a way that would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities because it does not include a housing component. Instead, accessibility to parklands, recreational facilities, and governmental facilities may be improved by having a nearby transit station.

Operation of the alignment would create a new transit line that would require security, including support from local police and fire departments. Metro provides Metro-employed and Metro-contracted security

staff for transit vehicles and facilities. Metro is evaluating additional options to address safety and security on Metro systems, including potentially forming its own transit police force. While operation of the alignment would require an increase in Metro security staff and would place some additional demand on other police services, the new demands are expected to be accommodated with current resources and would not significantly affect the ability of public service providers to maintain acceptable service ratios, response times, or other performance objectives. Operation of the alignment would not generate new residential populations greater than what is anticipated in the Southern California Association of Governments' regional growth projections, which would not result in the need for new public recreational facilities or increase the use of existing parks or government facilities. With the additional transit access provided by KNE, there would be opportunity to increase access to better accommodate demand for parks and recreational facilities.

As described above, operation of the alignment would not affect the functionality of fire protection, schools, parks, or other public facilities. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.15.7.1.3 KNE LA BREA ALIGNMENT

3.15.7.1.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction activities associated with the KNE La Brea Alignment would require property acquisition and construction easements. Property acquisition would be generally limited to properties currently zoned for commercial or industrial uses, and no residential uses, schools, or parks would be temporarily or permanently acquired. The property acquisition for construction under the KNE La Brea Alignment would not include land from fire stations, police stations, schools, parks, or other public facilities that would affect public services.

Pedestrian and bicycle access routes would be temporarily disrupted during construction (bicycle and pedestrian effects are discussed in Section 3.17, Transportation). To reduce potential effects of construction traffic and lane closures on emergency response times, Metro would coordinate with service providers for information on upcoming traffic conditions to allow for response planning. These requirements would be included in the TMP, as discussed in project measure PM TRA-2.

Off-street parking used by parkland, recreational facility, and community facility visitors may be temporarily removed for the duration of construction, which would require users to find alternative parking. However, access to parklands and community facilities during construction would be maintained as practicable; construction detour route signage would be provided; and appropriate signage, barriers, and fencing for pedestrian and bicycle detour routes would be posted to prevent pedestrians and bicyclists from entering the construction zones, as identified in the TMP under project measure PM TRA-2. Construction activities would be temporary; therefore, construction of the alignment would not result in permanent impacts to parklands, recreation facilities, community facilities, and bicycle facilities that would require the need for new facilities.

As described above, construction of the alignment would not have substantial adverse physical impacts associated with new or physically altered governmental facilities needed to maintain acceptable public services. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.15.7.1.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE La Brea Alignment would not require surface land acquisition from any park, school, recreational, or governmental facilities. Any subterranean easements would not affect the operation of surface park, recreational, or government facilities. Operation would not create or increase the residential population of the surrounding communities in a way that would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities because it does not include a housing component. Instead, accessibility to parklands, recreational facilities, and governmental facilities may be improved by having a nearby transit station.

Operation of the alignment would create a new transit line that would require security, including support from local police and fire departments. Metro provides Metro-employed and Metro-contracted security staff for transit vehicles and facilities. Metro is evaluating additional options to address safety and security on Metro systems, including potentially forming its own transit police force. While operation of the alignment would require an increase in Metro security staff and would place some additional demand on other police services, the new demands are expected to be accommodated with current resources and would not significantly affect the ability of public service providers to maintain acceptable service ratios, response times, or other performance objectives. Operation of the alignment would not generate new residential populations greater than what is anticipated in the Southern California Association of Governments' regional growth projections, which would not result in the need for new public recreational facilities or increase the use of existing parks or government facilities. With the additional transit access provided by KNE, there would be opportunity to increase access to better accommodate demand for parks and recreational facilities.

As described above, operation of the alignment would not affect the functionality of fire protection, schools, parks, or other public facilities. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.15.7.1.4 HOLLYWOOD BOWL DESIGN OPTION

3.15.7.1.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction activities for the Hollywood Bowl Design Option would be temporary and would not permanently conflict with access to parklands, recreational facilities, and governmental facilities. As with the alignments, the Hollywood Bowl Design Option would require property acquisition and construction easements for some construction activities. No Land and Water Conservation Fund Section 6(f) grant funds have been used for the Hollywood Bowl. Because there would not be a change in ownership of land from the Hollywood Bowl, the California Public Park Preservation Act of 1971 would not apply.

The Hollywood Bowl Design Option includes an alternate terminus station located at the Hollywood Bowl. The Hollywood Bowl Design Option would require a construction staging area of approximately three acres at the Hollywood Bowl, which would primarily be located within the parking areas used by event patrons. Construction of the design option would temporarily close Parking Lots C and D and a portion of Parking Lot B to support construction. KNE would temporarily displace between 250 and 410 of the available 1,270 parking spaces at the Hollywood Bowl. Existing alternate means to access the Hollywood Bowl include the Hollywood Bowl Shuttle or walking from the Metro B Line Hollywood/Highland Station, regional park & ride shuttles, and rideshare options.

As described above, construction of the design option would temporarily affect patron access to parking at the Hollywood Bowl. While there would be a temporary loss of parking, other access means exist in the vicinity and parking would be available following the completion of construction. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.15.7.1.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. The Hollywood Bowl Design Option would not generate new residential populations that would result in the need for new public recreational facilities or increase the use of existing parks or government facilities. The design option would include a new terminus station at the Hollywood Bowl, with either one or two station entrances constructed. Both station entrances would permanently displace approximately 100 parking stalls from the Hollywood Bowl Parking Lots C and D, reducing the capacity of parking at the Hollywood Bowl to approximately 1,170 parking stalls. However, the additional KNE transit service at the new station would provide more capacity for patrons to reach the Hollywood Bowl than would be lost to removed parking. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.15.7.1.5 MAINTENANCE AND STORAGE FACILITY

3.15.7.1.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. No residential uses, public schools, or parks would be permanently acquired for construction of the MSF, and the property acquisition for construction would not affect vehicular, bicycle, or pedestrian access. Construction of the MSF would not conflict with access to parklands, recreational facilities, and governmental facilities and would not be located on or disrupt parklands, recreational facilities, off-street bike facilities, or community facility properties. Construction-related traffic on regional roadways could incidentally contribute to delays for users accessing parks or governmental facilities, as discussed in Section 3.17, Transportation. Therefore, the MSF would have a less than significant impact during construction.

3.15.7.1.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the MSF would not result in substantial adverse physical impacts to or physically alter public parks, community, or other governmental facilities, nor would it generate a new residential population that would increase the need for new recreational facilities because no parklands and recreation facilities, bike facilities, and government facilities are located within

the RSA. Additional KNE light rail vehicles would enter and exit service at the MSF via the existing grade crossing for Division 16, consistent with how the current K Line light rail vehicles enter and exit service. The increase in at-grade crossings in the vicinity of the MSF would be spread over time periods when light rail vehicles enter and exit the yard, but could occur during an emergency service response. Any traffic delays would be short, taking only the time for the train to make the roadway crossing. Emergency service dispatch has real-time traffic conditions, so the potential for emergency service response delay is small. Therefore, the MSF would have a less than significant impact during operation.

3.15.7.2 IMPACT PUB-2: INCREASED USE OF RECREATIONAL FACILITIES

Impact PUB-2: Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

3.15.7.2.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.15.7.2.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE San Vicente–Fairfax Alignment would be temporary and would not generate permanent residences that would increase the use of existing neighborhood and regional parks or other recreational facilities resulting in accelerated physical deterioration of the facilities. Construction workers may use nearby parks or recreational facilities when not working, but such use would be temporary and incidental. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.15.7.2.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE San Vicente–Fairfax Alignment would improve accessibility to existing neighborhood parks and recreational facilities identified in Figure 3.15-1. The KNE San Vicente–Fairfax Alignment would not result in a direct increase to the local residential population that may result in an increased use of the parklands and recreational facilities that would accelerate their physical deterioration. The alignment would improve accessibility to the recreational facilities by providing a nearby transit station, which could increase use. The increase in use would be minimal and would not result in substantial physical deterioration of parklands and recreational facilities. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.15.7.2.2 KNE FAIRFAX ALIGNMENT

3.15.7.2.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE Fairfax Alignment would be temporary and would not generate permanent residences that would increase the use of existing neighborhood and regional parks or other recreational facilities resulting in accelerated physical deterioration of the facilities. Construction workers may use nearby parks or recreational facilities when not working, but such use would be temporary and incidental. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.15.7.2.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE Fairfax Alignment would improve accessibility to existing neighborhood parks and recreational facilities identified in Figure 3.15-1. The KNE Fairfax Alignment would not result in a direct increase to the local residential population that may result in an increased use of the parklands and recreational facilities that would accelerate their physical deterioration. The alignment would improve accessibility to the recreational facilities by providing a nearby transit station, which could increase use. The increase in use would be minimal and would not result in substantial physical deterioration of parklands and recreational facilities. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.15.7.2.3 KNE LA BREA ALIGNMENT

3.15.7.2.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE La Brea Alignment would be temporary and would not generate permanent residences that would increase the use of existing neighborhood and regional parks or other recreational facilities resulting in accelerated physical deterioration of the facilities. Construction workers may use nearby parks or recreational facilities when not working, but such use would be temporary and incidental. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.15.7.2.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE La Brea Alignment would improve accessibility to existing neighborhood parks and recreational facilities identified in Figure 3.15-1. The KNE La Brea Alignment would not result in a direct increase to the local residential population that may result in an increased use of the parklands and recreational facilities that would accelerate their physical deterioration. The alignment would improve accessibility to the recreational facilities by providing a nearby transit station, which could increase use. The increase in use would be minimal and would not result in substantial physical deterioration of parklands and recreational facilities. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.15.7.2.4 HOLLYWOOD BOWL DESIGN OPTION

3.15.7.2.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction activities for the Hollywood Bowl Design Option would be temporary and would not generate new residential populations that would significantly increase the use of existing parks and community facilities in a way that would result in accelerated physical deterioration of the facilities. Construction workers may use nearby parks or recreational facilities when not working, but such use would be temporary and incidental. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.15.7.2.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the Hollywood Bowl Design Option would not create new residential populations that directly increase the use of existing parks, recreational facilities, and bike facilities in the surrounding communities. Although improved access to parks, recreational facilities, and bike facilities may result in greater use, the City of Los Angeles Department of Recreation and Parks and County of Los Angeles would provide adequate services and resources so that the facilities are maintained to city standards. Improved transit access to the Hollywood Bowl, Highland Camrose Park, and Ford Amphitheater under the design option would provide an additional means of access to scheduled events but would not change the capacity of the facility. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.15.7.2.5 MAINTENANCE AND STORAGE FACILITY

3.15.7.2.5.1 CONSTRUCTION IMPACTS

No Impact. The MSF is located in an industrial area with aviation- and manufacturing-related land uses. There are no existing neighborhood and regional parks or other recreational facilities within the MSF RSA. Therefore, the MSF would have no impact during construction.

3.15.7.2.5.2 OPERATIONAL IMPACTS

No Impact. The MSF is located in an industrial area with aviation- and manufacturing-related land uses. There are no existing neighborhood and regional parks or other recreational facilities within the MSF RSA. The MSF would not create new residential populations that would increase the use of existing parks, recreational facilities, and bike facilities in the surrounding communities. The MSF would provide maintenance and storage services for KNE and would not provide improved access to parks, recreational facilities, and bike facilities that could result in increased use. Therefore, the MSF would have no impact during operation.

3.15.7.3 IMPACT PUB-3: NEW RECREATIONAL FACILITIES

Impact PUB-3: Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

3.15.7.3.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.15.7.3.1.1 CONSTRUCTION IMPACTS

No Impact. Construction of the KNE San Vicente–Fairfax Alignment would not include the construction of recreational facilities or require the expansion of existing recreational facilities. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during construction.

3.15.7.3.1.2 OPERATIONAL IMPACTS

No Impact. Operation of the KNE San Vicente–Fairfax Alignment would not include construction of recreational facilities or require the expansion of existing recreational facilities. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during operation.

3.15.7.3.2 KNE FAIRFAX ALIGNMENT

3.15.7.3.2.1 CONSTRUCTION IMPACTS

No Impact. Construction of the KNE Fairfax Alignment would not include the construction of recreational facilities or require the expansion of existing recreational facilities. Therefore, the KNE Fairfax Alignment would have no impact during construction.

3.15.7.3.2.2 OPERATIONAL IMPACTS

No Impact. Operation of the KNE Fairfax Alignment would not include construction of recreational facilities or require the expansion of existing recreational facilities. Therefore, the KNE Fairfax Alignment would have no impact during operation.

3.15.7.3.3 KNE LA BREA ALIGNMENT

3.15.7.3.3.1 CONSTRUCTION IMPACTS

No Impact. Construction of the KNE La Brea Alignment would not include the construction of recreational facilities or require the expansion of existing recreational facilities. Therefore, the KNE La Brea Alignment would have no impact during construction.

3.15.7.3.3.2 OPERATIONAL IMPACTS

No Impact. Operation of the KNE La Brea Alignment would not include construction of recreational facilities or require the expansion of existing recreational facilities. Therefore, the KNE La Brea Alignment would have no impact during operation.

3.15.7.3.4 HOLLYWOOD BOWL DESIGN OPTION

3.15.7.3.4.1 CONSTRUCTION IMPACTS

No Impact. Construction of the Hollywood Bowl Design Option would not include the construction of recreational facilities or require the expansion of existing recreational facilities. Therefore, the Hollywood Bowl Design Option would have no impact during construction.

3.15.7.3.4.2 OPERATIONAL IMPACTS

No Impact. Operation of the Hollywood Bowl Design Option would not include construction of recreational facilities or require the expansion of existing recreational facilities. Therefore, the Hollywood Bowl Design Option would have no impact during operation.

3.15.7.3.5 MAINTENANCE AND STORAGE FACILITY

3.15.7.3.5.1 CONSTRUCTION IMPACTS

No Impact. Construction of the MSF would not include the construction of recreational facilities or require the expansion of existing recreational facilities. Therefore, the MSF would have no impact during construction.

3.15.7.3.5.2 OPERATIONAL IMPACTS

No Impact. Operation of the MSF would not include construction of recreational facilities or require the expansion of existing recreational facilities. Therefore, the MSF would have no impact during operation.

3.15.7.4 MITIGATION MEASURES

The mitigation measure described below is provided to reduce significant impacts related to public services and recreational facilities. Section 3.15.7.4.2 discusses impact significance after mitigation.

3.15.7.4.1 MM PUB-1: RELOCATION PLAN FOR WEST HOLLYWOOD SHERIFF'S STATION

This mitigation measure is only applicable to the KNE San Vicente–Fairfax Alignment.

Construction of the KNE San Vicente–Fairfax Alignment would result in permanent displacement of the Los Angeles County Sheriff's Department West Hollywood Station property. The Sheriff's Station would be displaced by construction staging and a TBM launch site. Metro shall assume responsibility for relocation of the Sheriff's Station to another undetermined location within the vicinity that would meet the service requirements for the City of West Hollywood.

Prior to displacement of the station, Metro shall coordinate with the City of West Hollywood, Los Angeles County, and the Los Angeles County Sheriff's Department to create a relocation plan. The relocation plan shall assess and identify potential new location options for the Sheriff's Station and identify funding to develop an appropriate replacement property, such that police service levels would not deteriorate. The relocated Sheriff's Station would be operational prior to construction of the San Vicente/Santa Monica

Station. Relocation considerations in the plan shall include potential sites, costs and financing structures, development and ownership structures, and minimum required physical development components and amenities.

Details on displacement of the Los Angeles County West Hollywood Sheriff's Station are included in the KNE right-of-way plans provided as part of the Advanced Conceptual Engineering Drawings in Appendix 2-B.

3.15.7.4.2 IMPACT SIGNIFICANCE AFTER MITIGATION

As described in Section 3.15.7.1.1.1, there would be a significant impact related to full acquisition of the Los Angeles County Sheriff's Department West Hollywood Station (Impact PUB-1).

3.15.7.4.2.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

IMPACT PUB-1: PUBLIC FACILITIES

Implementation of mitigation measure MM PUB-1 (Relocation Plan for West Hollywood Sheriff's Station) during construction of the KNE San Vicente–Fairfax Alignment would reduce the significant construction impact identified under Impact PUB-1 to a less than significant level. With mitigation, a relocated Sheriff's Station would be operational prior to construction of the San Vicente/Santa Monica Station and the provision of community police services would not be affected. However, the physical change in the environment as a result of development of the future Sheriff's Station is not reasonably foreseeable because the replacement location is currently unknown. Once a preferred location and site-specific details are identified, a project-specific CEQA analysis would be conducted for the relocated Sheriff's Station site.

3.15.7.5 SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

Table 3.15-7 summarizes the public services and recreational facilities impact significance conclusions and applicable mitigation measures.

TABLE 3.15-7. KNE SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

IMPACT		IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES				
		KNE SAN VICENTE–FAIRFAX ALIGNMENT	KNE FAIRFAX ALIGNMENT	KNE LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MAINTENANCE AND STORAGE FACILITY
Impact PUB-1: Public Facilities	Impact Before Mitigation	Construction: Significant Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	Construction: MM PUB-1 Operation: None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
Impact PUB-2: Increased Use of Recreational Facilities	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: No Impact Operation: No Impact
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: No Impact Operation: No Impact
Impact PUB-3: New Recreational Facilities	Impact Before Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact	Construction: No Impact Operation: No Impact

Source: Connect Los Angeles Partners 2024
LTS = less than significant impact

3.16 TRANSPORTATION

3.16.1 INTRODUCTION

This discussion provides an evaluation of K Line Northern Extension (KNE) as it relates to transportation. It includes descriptions of the federal, state, and local regulatory setting, existing conditions, and the impacts from construction and operation of the proposed alignments and stations, design option, and maintenance and storage facility (MSF), as well as mitigation measures where applicable. For more detailed information, refer to the KNE Transportation Technical Report (Appendix 3.16-A).

3.16.2 REGULATORY FRAMEWORK

3.16.2.1 FEDERAL

There are no federal regulations applicable to the project regarding transportation.

3.16.2.2 STATE

The following state laws and regulations are relevant to construction and operation of the project:

- California Environmental Quality Act (CEQA) (Public Resources Code 1970)
- California Transportation Commission Statewide Transportation Improvement Program
- California Complete Streets Act of 2011 (Assembly Bill 1358)
- California Department of Transportation (Caltrans) Complete Streets Directive of 2008
- Strategic Highway Safety Plan and Local Roadway Safety Plan

3.16.2.3 REGIONAL

The following regional laws and regulations are relevant to construction and operation of the project:

- Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy compliance with Senate Bill 375

3.16.2.4 LOCAL

All Metro rail projects must be designed with the consideration of all Metro plans and framework that are relevant to the construction and operation of the project:

- Long Range Transportation Plan of 2020 (LRTP)
- Short Range Transportation Plan of 2014
- Vision 2028 Plan
- Complete Streets Policy of 2012
- Countywide Sustainability Planning Policy and Implementation Plan of 2012
- First Last Mile Strategic Plan and Planning Guidelines of 2014

- Active Transportation Strategic Plan of 2016
- Transit Service Policy of 2020
- Transfers Design Guide of 2018
- Systemwide Station Design Standards Policy of 2018
- Joint Development Policy of 2021
- Transit-Oriented Communities Policy of 2018
- Transit-Oriented Communities Implementation Plan of 2020
- Equity Platform of 2018
- Measure M Guidelines of 2017

All Metro rail projects must be designed in accordance with the Metro Rail Design Criteria (MRDC).

The following local laws and regulations are relevant to construction and operation of the project:

- Los Angeles County Department of Public Works Bicycle Master Plan Update of 2012
- City of Los Angeles Department of City Planning 2010 Bicycle Plan
- City of Los Angeles Complete Streets Design Guide of 2014
- City of Los Angeles Vision Zero Los Angeles 2015-2025
- City of Los Angeles Crenshaw Boulevard Streetscape Plan of 2015
- City of Los Angeles Department of City Planning Mobility Plan 2035
- City of Los Angeles Department of City Planning Safety Element update of 2021
- City of Los Angeles Department of Transportation (LADOT) Transportation Assessment Guidelines of 2020
- City of Los Angeles Green New Deal of 2019
- City of Los Angeles Exposition Corridor Transit Neighborhood Plan of 2019
- City of Los Angeles Hollywood Walk of Fame Master Plan of 2020
- City of West Hollywood General Plan 2035 Mobility Element update of 2011
- City of West Hollywood General Plan 2035 Safety and Noise Element update of 2011
- City of West Hollywood Bicycle and Pedestrian Mobility Plan update of 2017
- City of West Hollywood Santa Monica Boulevard Master Plan of 1999
- City of West Hollywood Design Toolbox of 2017
- City of West Hollywood Transportation Demand Management Ordinance of 2018
- City of West Hollywood Climate Action Plan of 2011
- City of West Hollywood Eastside Communities Priorities Plan of 2017
- City of West Hollywood Design District Streetscape Master Plan of 2014

The City of Los Angeles and City of West Hollywood have codes, ordinances, and general plans that regulate permitting, design, construction, and operational activities as they pertain to transportation, transit, pedestrian, bicycle, and emergency access facilities and operations.

3.16.3 METHODOLOGY

3.16.3.1 CEQA METHODOLOGY

The purpose of this analysis is to evaluate the project against CEQA thresholds of significance as the basis for determining the level of impacts related to transportation. The year 2019 was used as the base year for the existing conditions analysis and the future baseline was established for 2045. For the purposes of this Draft Environmental Impact Report, baseline conditions are defined as 2019 because that year represents the most recent available dataset prior to the COVID-19 pandemic that began in 2020. Where appropriate, changes that have been made to transit service since 2019 are noted for reference. The following methodologies were used to assess the potential CEQA impacts to regional transportation, transit, pedestrian and bicycle facilities, and emergency access. The regional transportation and transit impacts were evaluated for Los Angeles County and the entire SCAG region, and the pedestrian/bicycle analysis and emergency access analysis were conducted for an area within 0.25 mile of the proposed stations and the MSF.

- Transit Analysis: Metro Travel Demand Model (CBM18C) was used to obtain ridership forecasts for future conditions for both 2045 without Project and 2045 with Project Conditions.
- Pedestrian and Bicycle Analysis: The impacts of construction and operation on pedestrian and bicycle facilities within 0.25 mile of the stations, design option, and MSF were determined based on the design.
- Vehicle Miles Traveled (VMT) Analysis: The regional VMT for 2045 without Project Conditions was compared to the alignments and design option using the latest Metro Travel Demand Model (CBM18C).
- Emergency Access Analysis: The impacts within 0.25 mile of the stations, design option, and MSF on emergency facilities were determined.

3.16.3.2 SIGNIFICANCE THRESHOLDS

In accordance with Appendix G of the 2022 CEQA Guidelines, the project would have a significant impact related to transportation if it would:

- Impact TRA-1: Conflict with a program, plan, ordinance, or policy addressing the circulation system including transit, roadway, bicycle, and pedestrian facilities.
- Impact TRA-2: Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b).
- Impact TRA-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Impact TRA-4: Result in inadequate emergency access.

3.16.4 RESOURCE STUDY AREA

The resource study area (RSA) for this transportation assessment, including transit, pedestrian and bicycle facilities, and emergency access, is defined as the area within a 0.25-mile radius around the proposed stations and the MSF. In addition, regional transportation metrics were evaluated for Los Angeles County and the entire SCAG region to capture the effects of the alignments and stations, the design option, and the MSF on regional traffic patterns.

3.16.5 EXISTING SETTING

This existing setting discussion summarizes baseline (2019) conditions related to transportation within and near the KNE RSA.

3.16.5.1 REGIONAL SETTING

3.16.5.1.1 REGIONAL TRANSPORTATION SETTING

KNE is located in the Cities of Los Angeles and West Hollywood in Los Angeles County. Local and regional transit agencies, including Metro, provide multiple types of transit service in the area. An extensive freeway and arterial network serves the region; however, a north-south rail connection is lacking in the vicinity of KNE, which is primarily served by bus routes that have limited reliability and convenience due to roadway congestion. Additionally, a connection between the east-west rail services is inaccessible by rail in the area. Much of the existing and planned transit service in the KNE area is bus service that operates in mixed traffic and is delayed by heavy traffic congestion along arterials.

3.16.5.2 TRANSIT SYSTEM

This discussion identifies the transit services provided in the RSA by Metro, LADOT, Santa Monica Big Blue Bus, and West Hollywood Cityline Shuttles. Transit service types include light rail transit (LRT) that can operate in shared space with other traffic and carries lighter loads, heavy rail transit (HRT) that operates in a dedicated space and has a larger capacity, rapid bus, express bus, limited bus, and local bus lines. For the purposes of this Environmental Impact Report, baseline conditions are defined as 2019 because that year represents the most recent available dataset prior to the COVID-19 pandemic that began in 2020.

3.16.5.2.1 METRO RAIL AND BUS RAPID TRANSIT NETWORK

Metro operates the Los Angeles Metro Rail and bus rapid transit (BRT) network. As of 2023, the rail network consists of seven lines that connect 108 stations over 109 miles of track and the network continues to expand. Figure 3.16-1 shows the 2020 network, which is identical to the 2019 base year network, and Figure 3.16-2 shows the most current rail network as of 2023. The Metro rail network that operates within the KNE RSA is as follows.

- Metro B (Red) Line: Service from Union Station to North Hollywood
- Metro C (Green) Line: Service from Norwalk to Redondo Beach
- Metro D (Purple) Line: Service from Union Station to Wilshire/Western
- Metro E (Expo) Line: Service from Downtown to Santa Monica
- Metro K Line (Crenshaw/LAX): Service from Expo/Crenshaw to Westchester/Veterans (opened in 2022)

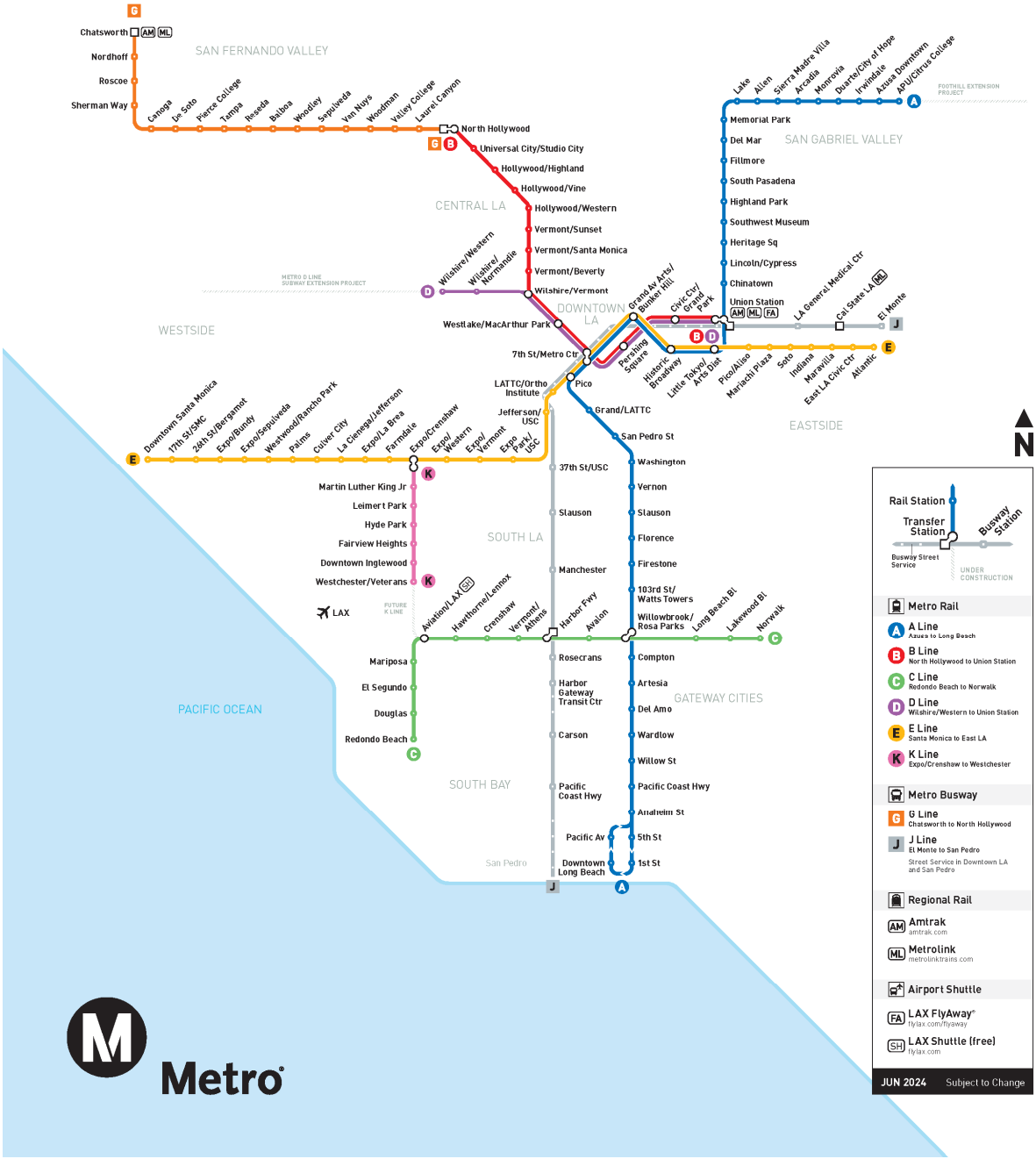
3.16.5.2.2 BUS NETWORK

Bus network service in the RSA includes rapid, express, limited, and local lines. Bus service is provided by Metro, as well as LADOT, Santa Monica Big Blue Bus, West Hollywood Cityline, and the Antelope Valley Transit Authority, as well as the Hollywood Bowl shuttle services. The 2019 bus network, which was used as the baseline conditions for the analysis, is shown in Figure 3.16-3. Changes to the bus network associated with the NextGen Bus Plan are noted in Table 3.16-1, Table 3.16-2, and Table 3.16-3 as applicable for each alignment.

FIGURE 3.16-1. METRO RAIL AND BUS RAPID TRANSIT NETWORK (2020)

Source: Metro 2020
Note: Metro 2020 map is consistent with 2019 rail service.

FIGURE 3.16-2. METRO RAIL AND BUS RAPID TRANSIT NETWORK (2023)



Source: Metro 2023

FIGURE 3.16-3. BUS NETWORK IN THE RESOURCE STUDY AREA (2019)

Source: Connect Los Angeles Partners 2024

3.16.5.2.3 KNE SAN VICENTE–FAIRFAX ALIGNMENT

Table 3.16-1 provides an outline of the baseline (2019) transit service in relation to each of the proposed KNE San Vicente–Fairfax Alignment stations.

TABLE 3.16-1. KNE SAN VICENTE–FAIRFAX ALIGNMENT BASELINE TRANSIT SERVICE AND FACILITIES (2019)

PROPOSED KNE STATION	BASELINE TRANSIT SERVICE AND FACILITIES WITHIN RSA
Crenshaw/Adams Station	Nine bus stops are near the station served by Metro lines 210, 710*, 14, and LADOT Midtown DASH.
Midtown Crossing Station	12 bus stops are near the station served by Metro lines 33, 733*, 30, 212, Big Blue Bus 7 and Rapid 7, and LADOT Midtown DASH.
Wilshire/Fairfax Station	15 bus stops are near the station served by Metro lines 20, 720**, 28, 217, 780, and LADOT DASH, as well as the planned Metro D Line Wilshire/Fairfax Station.
Fairfax/3rd Station	17 bus stops are near the station served by Metro lines 217, 780*, 16, 218, and LADOT Fairfax DASH.
La Cienega/Beverly Station	27 bus stops are near the station served by Metro lines 14, 105, 16, 30, 218, 617**, and LADOT Fairfax DASH.
San Vicente/Santa Monica Station	16 bus stops are near the station served by Metro lines 2, 4**, 10, 16**, 30**, 105**, 704*, and 705*.
Fairfax/Santa Monica Station	11 bus stops are near the station served by Metro lines 4, 218, 704*, 217, 780*, and West Hollywood's Cityline Orange and Blue shuttles.
La Brea/Santa Monica Station	10 bus stops are near the station served by Metro lines 4, 704*, 212, West Hollywood's Cityline Orange and Blue shuttles, and AVTA commuter service Line 786.
Hollywood/Highland Station	16 bus stops are near the station served by Metro lines 237**, 212, 217**, 222**, 224**, 780*, LADOT Hollywood DASH, and Hollywood Bowl shuttles, as well as the Metro B Line Hollywood/Highland Station.

Source: Metro, LADOT, Big Blue Bus
* Service discontinued with implementation of Metro's NextGen Bus Plan
** Service added or restructured with implementation of Metro's NextGen Bus Plan
AVTA = Antelope Valley Transit Authority; KNE = K Line Northern Extension; LADOT = Los Angeles Department of Transportation; RSA = resource study area

3.16.5.2.4 KNE FAIRFAX ALIGNMENT

Table 3.16-2 provides an outline of the baseline (2019) transit service in relation to each of the proposed KNE Fairfax Alignment stations.

TABLE 3.16-2. KNE SAN VICENTE–FAIRFAX ALIGNMENT BASELINE TRANSIT SERVICE AND FACILITIES (2019)

PROPOSED KNE STATION	BASELINE TRANSIT SERVICE AND FACILITIES WITHIN RSA
Crenshaw/Adams Station	9 bus stops are near the station served by Metro lines 210, 710*, 14, and LADOT Midtown DASH.
Midtown Crossing Station	12 bus stops are near the station served by Metro lines 33, 733*, 30, 212, Big Blue Bus 7 and Rapid 7, and LADOT Midtown DASH.
Wilshire/Fairfax Station	15 bus stops are near the station served by Metro lines 20, 720**, 28, 217, 780, and LADOT DASH, as well as the planned Metro D Line Wilshire/Fairfax Station.
Fairfax/3rd Station	17 bus stops are near the station served by Metro lines 217, 780*, 16, 218, and LADOT Fairfax DASH.
Fairfax/Santa Monica Station	11 bus stops are near the station served by Metro lines 4, 218, 704*, 217, 780*, and West Hollywood's Cityline Orange and Blue shuttles.
La Brea/Santa Monica Station	10 bus stops are near the station served by Metro lines 4, 704*, 212, West Hollywood's Cityline Orange and Blue shuttles, and AVTA commuter service Line 786.
Hollywood/Highland Station	16 bus stops are near the station served by Metro lines 237**, 212, 217**, 222**, 224**, 780*, LADOT Hollywood DASH, and Hollywood Bowl shuttles, as well as the Metro B Line Hollywood/Highland Station.

Source: Metro, LADOT, Big Blue Bus
* Service discontinued with implementation of Metro's NextGen Bus Plan
** Service added or restructured with implementation of Metro's NextGen Bus Plan
AVTA = Antelope Valley Transit Authority; KNE = K Line Northern Extension; LADOT = Los Angeles Department of Transportation; RSA = resource study area

3.16.5.2.5 KNE LA BREA ALIGNMENT

Table 3.16-3 provides an outline of the baseline (2019) transit service in relation to each of the proposed KNE La Brea Alignment stations.

TABLE 3.16-3. KNE LA BREA ALIGNMENT BASELINE TRANSIT SERVICE AND FACILITIES (2019)

PROPOSED KNE STATION	BASELINE TRANSIT SERVICE AND FACILITIES WITHIN RSA
Crenshaw/Adams Station	9 bus stops are near the station served by Metro lines 210, 710*, 14, and LADOT Midtown DASH.
Midtown Crossing Station	12 bus stops are near the station served by Metro lines 33, 733*, 30, 212, Big Blue Bus 7 and Rapid 7, and LADOT Midtown DASH.
Wilshire/La Brea Station	13 bus stops are near the station served by Metro lines 20, 720**, and 212.
La Brea/Beverly Station	10 bus stops are near the station served by Metro lines 14, 212, and Antelope Valley Transit Authority line 786.
La Brea/Santa Monica Station	10 bus stops are near the station served by Metro lines 4, 704*, 212, West Hollywood's Cityline Orange and Blue shuttles, and AVTA commuter service Line 786.
Hollywood/Highland Station	16 bus stops are near the station served by Metro lines 237**, 212, 217**, 222**, 224**, 780*, LADOT Hollywood DASH, and Hollywood Bowl shuttles, as well as the Metro B Line Hollywood/Highland Station.

Sources: Metro, LADOT, Big Blue Bus, Antelope Valley Transit Authority
* Service discontinued with implementation of Metro's NextGen Bus Plan
** Service added or restructured with implementation of Metro's NextGen Bus Plan
AVTA = Antelope Valley Transit Authority; KNE = K Line Northern Extension; LADOT = Los Angeles Department of Transportation; RSA = resource study area

3.16.5.2.6 HOLLYWOOD BOWL DESIGN OPTION

Transit service near the proposed Hollywood Bowl Design Option station includes four bus stops served by Metro line 222 and the 224 Owl route extension, as well as the Hollywood Bowl shuttles.

3.16.5.2.7 MAINTENANCE AND STORAGE FACILITY

Transit services near the MSF includes routes provided by Metro 102, 111, 115, and Santa Monica Big Blue Bus Line 3 and Rapid 3. In addition to the existing bus service, the Metro K Line and the Los Angeles International Airport Automated People Mover are both currently under construction and will be open prior to the project. Transit service under construction near the MSF and existing transit service in the area are shown in Figure 3.16-4.

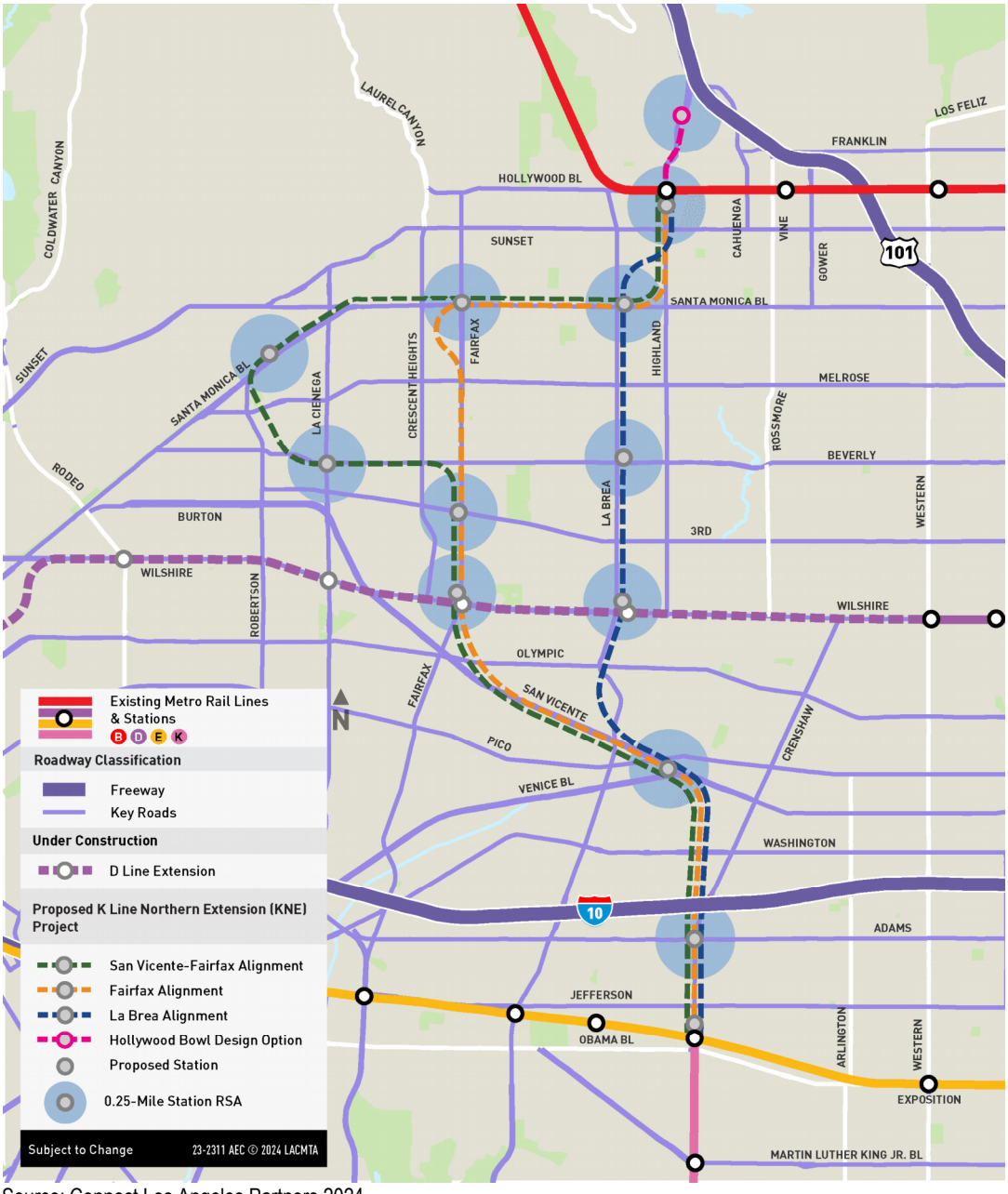
FIGURE 3.16-4. TRANSIT SERVICE NEAR THE MSF

Source: Connect Los Angeles Partners 2024

3.16.5.3 ROADWAY FACILITIES

The KNE RSA is served by a network of roadway facilities that includes interstate highways, state highways, and roadway arterials. Key roadways were considered due to their proximity to the specific location of individual proposed stations and would function as major connections to move people to and from the proposed stations. The key roadways are shown in Figure 3.16-5 and are provided by alignment below.

FIGURE 3.16-5. FREEWAY AND ARTERIAL NETWORKS IN THE KNE RESOURCE STUDY AREA



Source: Connect Los Angeles Partners 2024

3.16.5.3.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

An outline of the roadway facilities in relation to each KNE San Vicente–Fairfax Alignment station is provided in Table 3.16-4.

TABLE 3.16-4. KNE SAN VICENTE–FAIRFAX ALIGNMENT ROADWAY FACILITIES

STATION	KEY ROADWAYS
Crenshaw/Adams Station	Crenshaw Blvd and Adams Blvd
Midtown Crossing Station	San Vicente Blvd, Pico Blvd, and Venice Blvd
Wilshire/Fairfax Station	Wilshire Blvd, Fairfax Ave, and 6th St
Fairfax/3rd Station	Fairfax Ave, 3rd St, and Beverly Blvd
La Cienega/Beverly Station	La Cienega Blvd and Beverly Blvd
San Vicente/Santa Monica Station	San Vicente Blvd and Santa Monica Blvd
Fairfax/Santa Monica Station	Fairfax Ave and Santa Monica Blvd
La Brea/Santa Monica Station	La Brea Ave and Santa Monica Blvd
Hollywood/Highland Station	Hollywood Blvd and Highland Ave

Source: Connect Los Angeles Partners 2024

3.16.5.3.2 KNE FAIRFAX ALIGNMENT

An outline of the roadway facilities in relation to each KNE Fairfax Alignment station is provided in Table 3.16-5.

TABLE 3.16-5. KNE FAIRFAX ALIGNMENT ROADWAY FACILITIES

STATION	KEY ROADWAYS
Crenshaw/Adams Station	Crenshaw Blvd and Adams Blvd
Midtown Crossing Station	San Vicente Blvd, Pico Blvd, and Venice Blvd
Wilshire/Fairfax Station	Wilshire Blvd, Fairfax Ave, and 6th St
Fairfax/3rd Station	Fairfax Ave, 3rd St, and Beverly Blvd
Fairfax/Santa Monica Station	Fairfax Ave and Santa Monica Blvd
La Brea/Santa Monica Station	La Brea Ave and Santa Monica Blvd
Hollywood/Highland Station	Hollywood Blvd and Highland Ave

Source: Connect Los Angeles Partners 2024

3.16.5.3.3 KNE LA BREA ALIGNMENT

An outline of the roadway facilities in relation to each KNE La Brea Alignment station is provided in Table 3.16-6.

TABLE 3.16-6. KNE LA BREA ALIGNMENT ROADWAY FACILITIES

STATION	KEY ROADWAYS
Crenshaw/Adams Station	Crenshaw Blvd and Adams Blvd
Midtown Crossing Station	San Vicente Blvd, Pico Blvd, and Venice Blvd
Wilshire/La Brea Station	Wilshire Blvd, La Brea Ave, and 6th St
La Brea/Beverly Station	La Brea Ave and Beverly Blvd
La Brea/Santa Monica Station	La Brea Ave and Santa Monica Blvd
Hollywood/Highland Station	Hollywood Blvd and Highland Ave

Source: Connect Los Angeles Partners 2024

3.16.5.3.4 HOLLYWOOD BOWL DESIGN OPTION

The key roadway facilities near the Hollywood Bowl Design Option include Highland Avenue and US-101.

3.16.5.3.5 MAINTENANCE AND STORAGE FACILITY

The key roadway facilities near the MSF include Arbor Vitae Street and Aviation Boulevard.

3.16.5.4 BICYCLE FACILITIES

The RSA is served by a network of bicycle facilities that includes bike paths, bike lanes, sharrows, and protected bike lanes, as described below. Figure 3.16-6 shows examples of the four bicycle facilities described below:

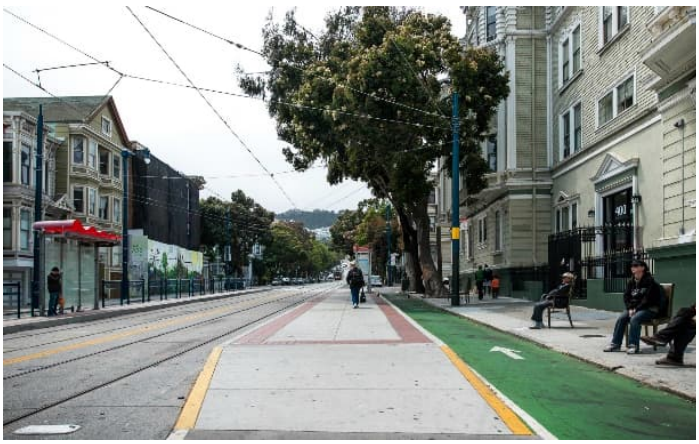
- Class I Bike Path: A paved pathway separated from motorized vehicular traffic by an open space or barrier and either within the highway rights-of-way or within an independent alignment.
- Class II Bike Lane: A striped lane for one-way bicycle travel on a street or highway.
- Class III Sharrow: A shared lane environment for bicycles and automobiles indicated by road markings.
- Class IV Protected Bike Lane: Bicycle lanes that provide further protection from other travel lanes by the use of a physical roadway intervention.

FIGURE 3.16-6. BICYCLE FACILITY CLASSIFICATIONS

Class I Bike Path

Class II Bike Lane

Class III Sharrow

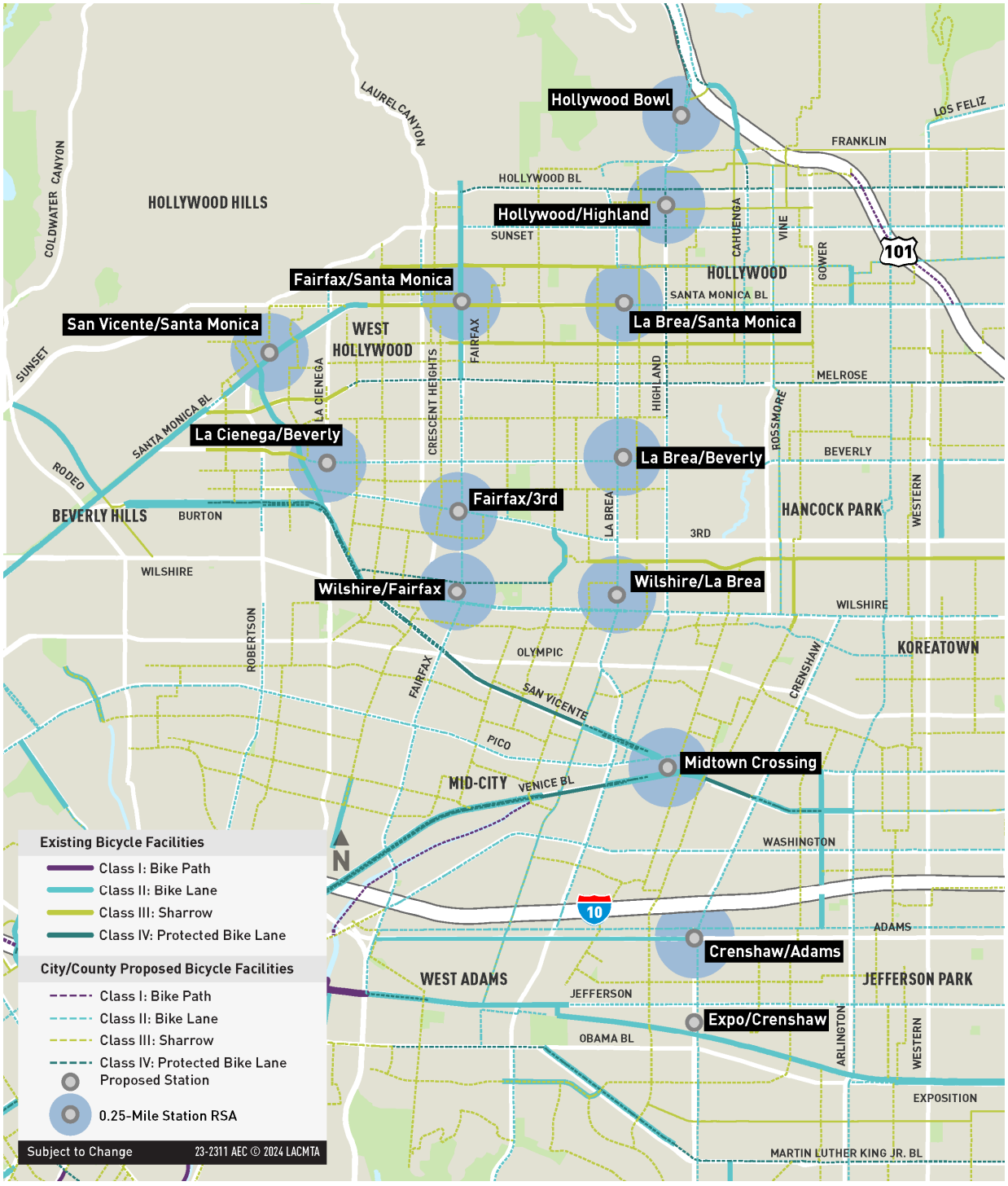


Class IV Protected Bike Lane

Source: National Association of City Transportation Officials Photo Library 2023

The existing and planned bicycle facilities around the station RSAs are shown in Figure 3.16-7 and outlined by alignment below.

FIGURE 3.16-7. BICYCLE FACILITIES RELEVANT TO THE KNE STATION RESOURCE STUDY AREAS



Source: City of Los Angeles 2010; City of West Hollywood 2017; Google Maps 2024

3.16.5.4.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

An outline of the bicycle facilities in relation to each KNE San Vicente–Fairfax Alignment station is provided in Table 3.16-7.

TABLE 3.16-7. KNE SAN VICENTE–FAIRFAX ALIGNMENT BICYCLE FACILITIES

STATION	EXISTING BICYCLE FACILITIES
Crenshaw/Adams Station	Class II bike lane is striped along Adams Blvd west of Crenshaw Blvd.
Midtown Crossing Station	Class II bike lane on San Vicente Blvd begins at Pico Blvd and continues west. Class II bike lane runs along Venice Blvd and becomes a Class IV protected bike lane east of West Blvd, in the westbound lane.
Wilshire/Fairfax Station	No existing bicycle facilities near station.
Fairfax/3rd Station	No existing bicycle facilities near station.
La Cienega/Beverly Station	Class II bike lanes are provided on San Vicente Blvd and Burton Way. Class III sharrows exist on 1st St, 3rd St, Orlando Ave, Huntley Drive, and Beverly Blvd.
San Vicente/Santa Monica Station	Class II bicycle lanes are located on Santa Monica Blvd and San Vicente Blvd, south of Santa Monica Blvd. Class III sharrow is provided along Melrose Ave.
Fairfax/Santa Monica Station	Class II bike lane is provided on Fairfax Ave. Class III sharrows are located on Santa Monica Blvd. Class III sharrows are located along Fountain Ave to the north and Willoughby Ave to the south.
La Brea/Santa Monica Station	Class III sharrows are on Formosa Ave, Orange Drive, and west of La Brea along Santa Monica Blvd.
Hollywood/Highland Station	Class III sharrows are located in the station area on Orange Drive, Selma Ave, and Yucca St.

Source: City of Los Angeles 2010, 2016; City of West Hollywood 2017; Google Maps 2024

3.16.5.4.2 KNE FAIRFAX ALIGNMENT

An outline of the bicycle facilities in relation to each KNE Fairfax Alignment station is provided in Table 3.16-8.

TABLE 3.16-8. KNE FAIRFAX ALIGNMENT BICYCLE FACILITIES

STATION	EXISTING BICYCLE FACILITIES
Crenshaw/Adams Station	Class II bike lane is striped along Adams Blvd west of Crenshaw Blvd.
Midtown Crossing Station	Class II bike lane on San Vicente Blvd begins at Pico Blvd and continues west. Class II bike lane runs along Venice Blvd and becomes a Class IV protected bike lane east of West Blvd, in the westbound lane.
Wilshire/Fairfax Station	No existing bicycle facilities near station.
Fairfax/3rd Station	No existing bicycle facilities near station.
Fairfax/Santa Monica Station	Class II bike lane is provided on Fairfax Ave. Class III sharrows are located on Santa Monica Blvd. Class III sharrows are located along Fountain Ave to the north and Willoughby Ave to the south.
La Brea/Santa Monica Station	Class III sharrows are on Formosa Ave, Orange Drive, and west of La Brea along Santa Monica Blvd.
Hollywood/Highland Station	Class III sharrows are located in the station area on Orange Drive, Selma Ave, and Yucca St.

Source: City of Los Angeles 2010, 2016; City of West Hollywood 2016; Google Maps 2024

3.16.5.4.3 KNE LA BREA ALIGNMENT

An outline of the bicycle facilities in relation to each KNE La Brea Alignment station is provided in Table 3.16-9.

TABLE 3.16-9. KNE LA BREA ALIGNMENT BICYCLE FACILITIES

STATION	EXISTING BICYCLE FACILITIES
Crenshaw/Adams Station	Class II bike lane is striped along Adams Blvd west of Crenshaw Blvd.
Midtown Crossing Station	Class II bike lane on San Vicente Blvd begins at Pico Blvd and continues west. Class II bike lane runs along Venice Blvd and become a Class IV protected bike lane east of West Blvd, in the westbound lane.
Wilshire/La Brea Station	No existing bicycle facilities near station.
La Brea/Beverly Station	No existing bicycle facilities near station.
La Brea/Santa Monica Station	Class III sharrows are on Formosa Ave, Orange Drive, and west of La Brea along Santa Monica Blvd.
Hollywood/Highland Station	Class III sharrows are located in the station area on Orange Drive, Selma Ave, and Yucca St.

Source: City of Los Angeles 2010, 2016; City of West Hollywood 2016; Google Maps 2024

3.16.5.4.4 HOLLYWOOD BOWL DESIGN OPTION

No existing bicycle facilities are located near the Hollywood Bowl Design Option.

3.16.5.4.5 MAINTENANCE AND STORAGE FACILITY

A Class II bicycle facility is located near the MSF along 96th Avenue.

3.16.5.5 PEDESTRIAN FACILITIES

The existing pedestrian facilities, including striping and signalized crosswalks, sidewalks, and major physical barriers, are outlined by alignment below.

3.16.5.5.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

An outline of the pedestrian facilities in relation to each KNE San Vicente–Fairfax Alignment station is provided in Table 3.16-10.

TABLE 3.16-10. KNE SAN VICENTE–FAIRFAX ALIGNMENT PEDESTRIAN FACILITIES

STATION	EXISTING PEDESTRIAN FACILITIES
Crenshaw/Adams Station	• Striping and signalized crosswalks are on all corners at the intersection of Crenshaw Blvd and Adams Blvd and the intersection of Crenshaw Blvd and 28th St. • Sidewalk widths range from 10 to 15 feet.
Midtown Crossing Station	• Striping and signalized crosswalks are provided on all corners at the intersection of San Vicente Blvd and Pico Blvd. • Three of the four directions have crosswalks at the intersection of San Vicente Blvd and Venice Blvd. • Sidewalk widths range from four to 15 feet.
Wilshire/Fairfax Station	• Striping and signalized crosswalks are provided on all corners at the intersection of Fairfax Ave and Wilshire Blvd. • At the intersections of Fairfax Ave and 6th St and of Fairfax Ave and 8th St, three of the four directions have crosswalks. • Sidewalk widths range from 10 to 30 feet.
Fairfax/3rd Station	• Striping and signalized crosswalks are provided on all corners at the intersection of Fairfax Ave and 3rd St and at the intersection of Fairfax Ave and Beverly Blvd. • Sidewalk widths range from 6 to 15 feet.
La Cienega/Beverly Station	• Striping and signalized crosswalks are provided on all corners at the intersection of La Cienega Blvd and Beverly Blvd and at the intersection of Beverly Blvd and Orlando Ave. • Sidewalk widths range from 10 to 15 feet.
San Vicente/Santa Monica Station	• Striping and signalized crosswalks are on all corners at the intersection of San Vicente Blvd and Santa Monica Blvd. • Multiple mid-block crossings are provided along San Vicente Blvd and Santa Monica Blvd, notably at Palm Ave, Hancock Ave, and Westbourne Drive. • Sidewalk widths range from 6 to 26 feet.
Fairfax/Santa Monica Station	• Striping and signalized crosswalks are provided on all corners at the intersection of Fairfax Ave and Santa Monica Blvd. • The intersection of Fairfax Ave and Romaine St provides an unprotected and unsignalized pedestrian crossing. • Signalized mid-block crosswalks are located on Santa Monica Blvd between Orange Grove Ave, Ogden Drive, and Genesee Ave. • Sidewalk widths range from eight to 18 feet.

STATION	EXISTING PEDESTRIAN FACILITIES
La Brea/Santa Monica Station	• Striping and signalized crosswalks are provided on all corners at the intersection of La Brea Ave and Santa Monica Blvd, La Brea Ave and Lexington Ave, and Santa Monica Blvd and Orange Drive. • An unprotected and unsignalized mid-block crosswalk for Santa Monica Blvd is located at the intersection with Sycamore Ave. • Sidewalk widths range from 9 to 20 feet.
Hollywood/Highland Station:	• Striping and signalized crosswalks are provided on all corners at the intersection of Hollywood Blvd and Highland Ave. • Numerous signalized mid-block crosswalks are located on Hollywood Blvd. • At the intersection of Highland Ave and Selma Ave, two of the three directions have crosswalks. • A signalized mid-block crosswalk is provided at the intersection of Highland Ave and Hawthorn Ave. • Sidewalk widths range from 10 to 25 feet.

Source: Google Earth 2022

3.16.5.5.2 KNE FAIRFAX ALIGNMENT

An outline of the pedestrian facilities in relation to each KNE Fairfax Alignment station is provided in Table 3.16-11.

TABLE 3.16-11. KNE FAIRFAX ALIGNMENT PEDESTRIAN FACILITIES

STATION	EXISTING PEDESTRIAN FACILITIES
Crenshaw/Adams Station	• Striping and signalized crosswalks are on all corners at the intersection of Crenshaw Blvd and Adams Blvd and the intersection of Crenshaw Blvd and 28th St. • Sidewalk widths range from 10 to 15 feet.
Midtown Crossing Station	• Striping and signalized crosswalks are provided on all corners at the intersection of San Vicente Blvd and Pico Blvd. • Three of the four directions have crosswalks at the intersection of San Vicente Blvd and Venice Blvd. • Sidewalk widths range from 4 to 15 feet.
Wilshire/Fairfax Station	• Striping and signalized crosswalks are provided on all corners at the intersection of Fairfax Ave and Wilshire Blvd. • At the intersections of Fairfax Ave and 6th St and of Fairfax Ave and 8th Street, three of the four directions have crosswalks. • Sidewalk widths range from 10 to 30 feet.
Fairfax/3rd Station	• Striping and signalized crosswalks are provided on all corners at the intersection of Fairfax Ave and 3rd St and at the intersection of Fairfax Ave and Beverly Blvd. • Sidewalk widths range from 6 to 15 feet.
Fairfax/Santa Monica Station	• Striping and signalized crosswalks are provided on all corners at the intersection of Fairfax Ave and Santa Monica Blvd. • The intersection of Fairfax Ave and Romaine St provides an unprotected and unsignalized pedestrian crossing. • Signalized mid-block crosswalks are located on Santa Monica Blvd between Orange Grove Ave, Ogden Drive, and Genesee Ave. • Sidewalk widths range from 8 to 18 feet.

STATION	EXISTING PEDESTRIAN FACILITIES
La Brea/Santa Monica Station:	• Striping and signalized crosswalks are provided on all corners at the intersection of La Brea Ave and Santa Monica Blvd, La Brea Ave and Lexington Ave, and Santa Monica Blvd and Orange Drive. • An unprotected and unsignalized mid-block crosswalk for Santa Monica Blvd is located at the intersection with Sycamore Ave. • Sidewalk widths range from 9 to 20 feet.
Hollywood/Highland Station:	• Striping and signalized crosswalks are provided on all corners at the intersection of Hollywood Blvd and Highland Ave. • Numerous signalized mid-block crosswalks are located on Hollywood Blvd. • At the intersection of Highland Ave and Selma Ave, two of the three directions have crosswalks. • A signalized mid-block crosswalk is provided at the intersection of Highland Ave and Hawthorn Ave. • Sidewalk widths range from 10 to 25 feet.

Source: Google Earth 2022

3.16.5.5.3 KNE LA BREA ALIGNMENT

An outline of the pedestrian facilities in relation to each KNE La Brea Alignment station is provided in Table 3.16-12.

3.16.5.5.4 HOLLYWOOD BOWL DESIGN OPTION

The pedestrian facilities in relation to the Hollywood Bowl Design Option include striping and signalized crosswalks on all corners at the intersection of Highland Avenue and Camrose Drive/Milner Road. A pedestrian tunnel is located near the entrance of the Hollywood Bowl/US-101 entrance ramp that allows for travel across Highland Avenue. A signalized crosswalk with striping is located on Cahuenga Boulevard that provides access to Odin Street from the east. Sidewalks near the station range from seven to 15 feet wide. No sidewalks are provided on the east side of Highland Avenue north of Odin Street or on Cahuenga Boulevard northwest of Odin Street.

3.16.5.5.5 MAINTENANCE AND STORAGE FACILITY

The MSF is located in an industrial area with a poor pedestrian environment and long block lengths. Sidewalk widths surrounding the MSF range from five to 10 feet. Signalized crosswalks are provided at Arbor Vitae Street/Airport Boulevard, Arbor Vitae Street/Bellanca Avenue, Arbor Vitae Street/Aviation Boulevard, Aviation Boulevard/Century Boulevard, 98th Street/Airport Boulevard, and 96th Street/Airport Boulevard.

TABLE 3.16-12. KNE LA BREA ALIGNMENT PEDESTRIAN FACILITIES

STATION	EXISTING PEDESTRIAN FACILITIES
Crenshaw/Adams Station	• Striping and signalized crosswalks are on all corners at the intersection of Crenshaw Blvd and Adams Blvd and the intersection of Crenshaw Blvd and 28th St. • Sidewalk widths range from 10 to 15 feet.
Midtown Crossing Station	• Striping and signalized crosswalks are provided on all corners at the intersection of San Vicente Blvd and Pico Blvd. • Three of the four directions have crosswalks at the intersection of San Vicente Blvd and Venice Blvd. • Sidewalk widths range from 4 to 15 feet.
Wilshire/La Brea Station	• Striping and signalized crosswalks are provided on all corners at the intersection of La Brea Ave and Wilshire Blvd, the intersection of La Brea Ave and 6th St, and the intersection of La Brea Ave and 8th St. • Sidewalk widths range from 8 to 20 feet.
La Brea/Beverly Station	• Striping and signalized crosswalks are provided on all corners at the intersection of La Brea Ave and Beverly Blvd and the intersection of La Brea Ave and Oakwood Ave. • Sidewalk widths range from 12 to 20 feet.
La Brea/Santa Monica Station	• Striping and signalized crosswalks are provided on all corners at the intersection of La Brea Ave and Santa Monica Blvd, La Brea Ave and Lexington Ave, and Santa Monica Blvd and Orange Drive. • An unprotected and unsignalized mid-block crosswalk for Santa Monica Blvd is located at the intersection with Sycamore Ave. • Sidewalk widths range from 9 to 20 feet.
Hollywood/Highland Station	• Striping and signalized crosswalks are provided on all corners at the intersection of Hollywood Blvd and Highland Ave. • Numerous signalized mid-block crosswalks are located on Hollywood Blvd. • At the intersection of Highland Ave and Selma Ave, two of the three directions have crosswalks. • A signalized mid-block crosswalk is provided at the intersection of Highland Ave and Hawthorn Ave. • Sidewalk widths range from 10 to 25 feet.

Source: Google Earth 2022

3.16.5.6 EMERGENCY SERVICE FACILITIES

Emergency service facilities are described in Section 3.15, Public Services and Recreation. Emergency services within the RSAs include police, fire, and medical facilities provided by the following facilities:

- Police Services: Los Angeles Police Department (LAPD) Wilshire Division, LAPD Southwest Division, LAPD Hollywood Division, LAPD Pacific Division, West Hollywood Sheriff, Inglewood Police
- Fire Services: Los Angeles Fire Department (LAFD) Battalion 18, LAFD Battalion 5, LAFD Battalion 4, Los Angeles County Fire Department (LACFD) Battalion 1, LACFD Battalion 20
- Medical Services: Cedars-Sinai Medical Center

The emergency service facilities are outlined by alignment below.

3.16.5.6.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

An outline of the emergency service facilities in relation to each KNE San Vicente–Fairfax Alignment station is provided in Table 3.16-13.

TABLE 3.16-13. KNE SAN VICENTE–FAIRFAX ALIGNMENT EMERGENCY SERVICE FACILITIES

STATION	EMERGENCY SERVICE FACILITIES
Crenshaw/Adams Station	LAPD Southwest Division, LAFD Battalion 1
Midtown Crossing Station	LAPD Wilshire Division, LAFD Battalion 18
Wilshire/Fairfax Station	LAPD Wilshire Division, LAFD Battalion 18
Fairfax/3rd Station	LAPD Wilshire Division, LAFD Battalion 18
La Cienega/Beverly Station	LAPD Wilshire Division, West Hollywood Sheriff, LAFD Battalion 18, LACFD Battalion 1
San Vicente/Santa Monica Station	West Hollywood Sheriff, LACFD Battalion 1
Fairfax/Santa Monica Station	West Hollywood Sheriff, LACFD Battalion 1, LAFD Battalion 5
La Brea/Santa Monica Station	West Hollywood Sheriff, LAPD Hollywood Division, LAFD Battalion 5
Hollywood/Highland Station	LAPD Hollywood Division, LAFD Battalion 5

Source: Los Angeles County Sheriff's Department; Los Angeles Police Department; Los Angeles County Fire Department; Los Angeles Fire Department 2023
LACFD = Los Angeles County Fire Department; LAFD = Los Angeles Fire Department; LAPD = Los Angeles Police Department

3.16.5.6.2 KNE FAIRFAX ALIGNMENT

An outline of the emergency facilities in relation to each KNE Fairfax Alignment station is provided in Table 3.16-14.

TABLE 3.16-14. KNE FAIRFAX ALIGNMENT EMERGENCY SERVICE FACILITIES

STATION	EMERGENCY SERVICE FACILITIES
Crenshaw/Adams Station	LAPD Southwest Division, LAFD Battalion 1
Midtown Crossing Station	LAPD Wilshire Division, LAFD Battalion 18
Wilshire/Fairfax Station	LAPD Wilshire Division, LAFD Battalion 18
Fairfax/3rd Station	LAPD Wilshire Division, LAFD Battalion 18
Fairfax/Santa Monica Station	West Hollywood Sheriff, LACFD Battalion 1, LAFD Battalion 5
La Brea/Santa Monica Station	West Hollywood Sheriff, LAPD Hollywood Division, LAFD Battalion 5
Hollywood/Highland Station	LAPD Hollywood Division, LAFD Battalion 5

Source: Los Angeles County Sheriff's Department; Los Angeles Police Department; Los Angeles County Fire Department; Los Angeles Fire Department 2023
LACFD = Los Angeles County Fire Department; LAFD = Los Angeles Fire Department; LAPD = Los Angeles Police Department

3.16.5.6.3 KNE LA BREA ALIGNMENT

An outline of the emergency facilities in relation to each KNE La Brea Alignment station is provided in Table 3.16-15.

TABLE 3.16-15. KNE LA BREA ALIGNMENT EMERGENCY FACILITIES

STATION	EMERGENCY SERVICE FACILITIES
Crenshaw/Adams Station	LAPD Southwest Division, LAFD Battalion 1
Midtown Crossing Station	LAPD Wilshire Division, LAFD Battalion 18
Wilshire/La Brea Station	LAPD Wilshire Division, LAFD Battalion 18
La Brea/Beverly Station	LAPD Wilshire Division, LAFD Battalion 18
La Brea/Santa Monica Station	West Hollywood Sheriff, LAPD Hollywood Division, LAFD Battalion 5
Hollywood/Highland Station	LAPD Hollywood Division, LAFD Battalion 5

Source: Los Angeles County Sheriff's Department; Los Angeles Police Department; Los Angeles County Fire Department; Los Angeles Fire Department 2023
LACFD = Los Angeles County Fire Department; LAFD = Los Angeles Fire Department; LAPD = Los Angeles Police Department

3.16.5.6.4 HOLLYWOOD BOWL DESIGN OPTION

The emergency service facilities in relation to the Hollywood Bowl Design Option include the LAPD Hollywood Division and the LAFD Battalion 5.

3.16.5.6.5 MAINTENANCE AND STORAGE FACILITY

The emergency service facilities in relation to the MSF include the Inglewood Police, LAPD Pacific Division, LACFD Battalion 20, and LAFD Battalion 4.

3.16.6 PROJECT MEASURES

Project measures are design features, best management practices (BMPs), or other commitments that Metro would implement as part of all proposed alignments, the design option, and the MSF to reduce or avoid environmental effects associated with project construction and operation. Project measures are not the same as mitigation measures, which are used to reduce an environmental impact's significance level. Where applicable, project measures are also discussed in Section 3.16.7 as part of the evaluation of environmental impacts.

3.16.6.1 PM TRA-1: OPERATIONAL BEST MANAGEMENT PRACTICES

Operational BMPs for the alignments and stations, the design option, and the MSF 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 standards.

- Metro shall engage in first/last mile planning with local jurisdictions to improve the safety of station access for pedestrians and bicyclists. Examples of first/last mile improvements could include:
  - Signal timing for pedestrians and cyclists
  - Bike facilities and bike parking
  - Wayfinding signage to key destinations and transit connections
  - New or improved sidewalks and crosswalks
  - New or improved bus shelters and digital information signs
- Operation of the project shall not conflict with any identified local programs, plans, or policies for circulation elements in coordination with local jurisdictions.
- Stations shall be designed in accordance with the MRDC, including fire/life safety design criteria, to ensure safety and to 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 OSHA, California Public Utilities Commission, and Metro safety and security programs and standards (i.e., MRDC, Metro Systemwide Station Design Standards Policy, and Metro Transit Service Policy).
- Any station curbside passenger pick-up/drop-off areas shall be designed according to applicable state, Metro, and city design criteria and standards.
- Driveway access to the MSF shall be designed according to applicable state, Metro, and city design criteria and standards.

3.16.6.2 PM TRA-2: CONSTRUCTION BEST MANAGEMENT PRACTICES

Construction BMPs for the alignments and stations, the design option, and the MSF shall include the following:

- Cooperation with the corridor cities and Caltrans 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 alignments and stations, the design option, and the MSF shall be maintained during construction.
- Construction activities shall comply with OSHA, California OSHA, and Metro safety and security programs.
- Safety for pedestrians, bicyclists, and motorists shall be maintained during construction using signage, partial lane closures, construction barriers, and supervision by safety and security personnel at access points and throughout construction sites.

- Metro shall prepare a Traffic Management Plan (TMP) in coordination with Caltrans, cities, and local fire and police departments prior to initiating construction activities that include the following:
  - Standard practices shall be followed that include scheduling of lane and/or road closures to minimize disruptions.
  - Detour plans shall be prepared for any streets requiring a full closure to provide safe alternate routes to vehicular traffic, pedestrians, and bicyclists during these closures.
  - Traffic control plans shall be prepared to route vehicles, bicyclists, and pedestrians around any partial closures of streets, bicycle facilities, and sidewalks.
  - Information on bus stop relocation and modification to bus routes shall be provided, as applicable. Signs shall be posted to inform transit users in advance of street closures.
  - Construction timings and street closure information shall be available to the public through media alerts, the project's website, and changeable message signs.
  - The nearest local first responders shall be notified, as appropriate, of traffic control measures in the TMP during construction to coordinate emergency response routing.
  - The delivery and pick up of construction material during non-peak travel periods shall be scheduled to the extent possible to reduce the potential of conflicts between construction trucks and commuter traffic.
  - Coordination shall occur with other construction projects in the vicinity.
- 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, California OSHA, California Public Utilities Commission, California Manual on Uniform Traffic Control Devices (MUTCD), and Metro safety and security programs and standards (i.e., MRDC and Metro Systemwide Station Design Standards Policy). The construction TMP will be prepared in compliance with these standards.
- Financial assistance may be provided to small businesses along the proposed alignments and stations, the design option, and the MSF that are directly affected by construction activities through grants to cover certain fixed operating expenses such as utilities, rent or mortgage, and insurance.
- Metro shall coordinate with the Hollywood Bowl to maintain circulation and access to the Hollywood Bowl during construction of the optional Hollywood Bowl Station.

3.16.7 IMPACT EVALUATION AND MITIGATION MEASURES

This analysis presents the construction and operational impacts for transportation, as well as any applicable mitigation measures associated with KNE. A summary of the impact conclusions and applicable mitigation measures is found in Table 3.16-20 in Section 3.16.7.5.

3.16.7.1 IMPACT TRA-1: CONSISTENCY WITH POLICIES

Impact TRA-1: Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

3.16.7.1.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.16.7.1.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE San Vicente–Fairfax Alignment would involve temporary transit, roadway, bicycle, and pedestrian circulation changes due to street and sidewalk closures, and possible relocation of bus stops in the RSA. Street closures would be concentrated in areas that would require cut-and-cover construction, including station boxes, crossover structures, connection boxes, and tunnel boring machine (TBM) retrieval sites. Street closures, especially full street closures, could disrupt transit service, roadway circulation, and bicycle facilities. To the extent feasible, full street closures would be limited to weekends, while partial closures may occur for several months at a time. The locations and durations of street closures, haul routes, and other construction activities that could impact the transportation network are summarized in Appendix 2-C, Construction Approach Report.

The construction impacts on the RSA circulation system, including transit facilities, roadways, and bicycle and pedestrian circulation, is summarized below.

- Transit: During construction of the alignment, possible street closures might require temporarily relocating existing bus stops and rerouting buses. Possible delays and increased travel times could occur due to construction zones and temporary lane closures. In addition to street closures, service along the Metro B, D, E, and K Lines would be temporarily affected while the project's connections are being constructed. Partial closures would occur at the Metro B, D, E, and K Line stations, tracks, and access to entrances would be limited during construction. These partial closures would mostly occur during nights and weekends. Construction of the alignment is not anticipated to directly affect operation of the Metro Bus Division located near the San Vicente/Santa Monica Station, and any detours in and out of the Division would be managed through the TMP developed under project measure PM TRA-2.
- Roadways: During construction of the alignment, detours associated with the temporary street and lane closures would change the vehicular circulation in the RSA and would result in temporary access limitations. The additional construction-related traffic could result in queuing issues at the I-10/Crenshaw Boulevard interchange exit ramps. Construction activities at selected areas such as the Crenshaw/Adams Station and the La Brea/Santa Monica Station, which are near Caltrans facilities, would require coordination with Caltrans. The proposed haul routes and truck freeway access locations would be finalized in coordination with Caltrans. It is anticipated that, due to the nature of the construction activity, the road network near the TBM launch sites would experience higher levels of construction-related traffic.
- Bicycle and Pedestrian Circulation: Construction of the San Vicente–Fairfax Alignment would not conflict with the plans and policies that prioritize bicycle and pedestrian access and would not preclude expansion and improvement of bicycle and pedestrian facilities in the RSA. However,

construction activities would temporarily restrict access to bicycle and pedestrian facilities in the RSA. Sidewalks in the RSA would be affected by either full or partial street closures.

As described in project measure PM TRA-2, a construction TMP would be prepared in coordination with all local jurisdictions affected by construction. The TMP would include information on bus detours and relocated stops and about the partial closures and limited access at the affected Metro B, D, E, and K Line stations. The TMP would include information on street and lane closures, duration of these closures, and detour routes. Warning signs and media alerts would be used to inform transit users, motorists, and bicyclists and pedestrians of the upcoming closures and the duration of such closures. The alignment would be constructed per applicable state, Metro, and city design criteria and standards.

For the reasons described above, the alignment would not conflict with programs, plans, ordinances, or policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.16.7.1.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. The KNE San Vicente–Fairfax Alignment would create a new transit connection and would increase mobility to communities in the region. The alignment is not in conflict with any regional or local jurisdictions' policies and the project is included in the Metro LRTP.

The operational impacts on the RSA circulation system, including transit facilities, roadways, and bicycle and pedestrian circulation, is summarized below.

- **Transit**: Jurisdictions in the region have set goals to improve mobility, encourage the use of transit, and provide affordable and efficient transit services through their plans and policies. The alignment would extend the Metro K Line from the E Line to the D and B Lines, enhancing transit connectivity. The estimated ridership for the KNE San Vicente–Fairfax Alignment is forecasted to be 59,700 daily project trips in the year 2045. Forecasted ridership demonstrates that operation of the alignment would provide a measurable benefit to transit riders in the corridor. The alignment is consistent with all the programs and policies addressing transit circulation in the RSA as well as Metro plans and policies that address transit development and operations, including the 2020 LRTP, Vision 2028, and Measure M guidelines.
- **Roadways:** The goals of the jurisdictions related to roadways in the region include implementing complete streets features, improving mobility for all modes of transportation, and reducing VMT. The alignment would not conflict with those goals and would advance the goals pertaining to reduction of VMT by reducing regional VMT. The alignment would operate underground, and light rail vehicle operations would not change vehicular circulation on roadways in the RSA. Parking facilities would not be provided at stations, and the majority of riders are anticipated to access stations via transit, walking, or bicycling. While some passengers would access stations via vehicular pick-up or drop-off, it is anticipated to be a small percentage of overall access, and curbside drop-off/pick-up would be managed in accordance with local plans and policies per project measure PM TRA-1.

- Bicycle and Pedestrian Circulation: Jurisdictions in the region have set goals to expand, improve, and provide an interconnected system of bikeways and support facilities, to provide and maintain high-quality pedestrian access, and to implement a balanced transportation system through their plans and policies. The alignment would not conflict with the plans and policies that prioritize bicycle and pedestrian access and would not preclude expansion and improvement of bicycle and pedestrian facilities in the RSA. In addition, as described in project measure PM TRA-1, Metro would engage in first/last mile planning with local jurisdictions to enhance safety of pedestrian and bicyclist station access.

For the reasons described above, the alignment would not conflict with programs, plans, ordinances, or policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.16.7.1.2 KNE FAIRFAX ALIGNMENT

3.16.7.1.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE Fairfax Alignment would involve temporary transit, roadway, bicycle, and pedestrian circulation changes due to street and sidewalk closures, and possible relocation of bus stops in the RSA. Street closures would be concentrated in areas that would require cut-and-cover construction, including station boxes, crossover structures, connection boxes, and TBM retrieval sites. Street closures, especially full street closures, could disrupt transit service, roadway circulation, and bicycle facilities. To the extent feasible, full street closures would be limited to weekends, while partial closures may occur for several months at a time. The locations and durations of street closures, haul routes, and other construction activities that could impact the transportation network are summarized in Appendix 2-C, Construction Approach Report.

The construction impacts on the RSA circulation system, including transit facilities, roadways, and bicycle and pedestrian circulation, are summarized below.

- Transit: During construction of the alignment, possible street closures might require temporarily relocating existing bus stops and rerouting buses. Possible delays and increased travel times could occur due to construction zones and temporary lane closures. In addition to street closures, service along the Metro B, D, E, and K Lines would be temporarily affected while the project's connections are being constructed. Partial closures would occur at the Metro B, D, E, and K Line stations and tracks, and access to entrances would be limited during construction. These partial closures would mostly occur during nights and weekends.
- Roadways: During construction of the alignment, detours associated with the temporary street and lane closures would change the vehicular circulation in the RSA and would result in temporary access limitations. The additional construction-related traffic could result in queuing issues at the I-10/Crenshaw Boulevard interchange exit ramps. Construction activities at selected areas such as the Crenshaw/Adams Station and the La Brea/Santa Monica Station, which are near Caltrans facilities, would require coordination with Caltrans. The proposed haul routes and truck

freeway access locations would be finalized in coordination with Caltrans. It is anticipated that, due to the nature of the construction activity, the road network near the TBM launch sites would experience higher levels of construction-related traffic.

- Bicycle and Pedestrian Circulation: Construction of the KNE Fairfax Alignment would not conflict with the plans and policies that prioritize bicycle and pedestrian access and would not preclude expansion and improvement of bicycle and pedestrian facilities in the RSA. However, construction activities would temporarily restrict access to bicycle and pedestrian facilities in the RSA. Sidewalks in the RSA would be affected by either full or partial street closures.

As described in project measure PM TRA-2, a construction TMP would be prepared in coordination with all local jurisdictions affected by construction. The TMP would include information on bus detours and relocated stops and about the partial closures and limited access at the affected Metro B, D, E, and K Line stations. The TMP would include information on street and lane closures, duration of these closures, and detour routes. Warning signs and media alerts would be used to inform transit users, motorists, bicyclists, and pedestrians of the upcoming closures and the duration of such closures. The alignment would be constructed per applicable state, Metro, and city design criteria and standards.

For the reasons described above, the alignment would not conflict with programs, plans, ordinances, or policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.16.7.1.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. The KNE Fairfax Alignment would create a new transit connection and would increase mobility to communities in the region. The alignment is not in conflict with any regional or local jurisdictions' policies, and the project is included in the Metro LRTP.

The operational impacts on the RSA circulation system, including transit facilities, roadways, and bicycle and pedestrian circulation, are summarized below.

- Transit: Jurisdictions in the region have set goals to improve mobility, encourage the use of transit, and provide affordable and efficient transit services through their plans and policies. The alignment would extend the Metro K Line from the E Line to the D and B Lines, enhancing transit connectivity. The estimated ridership for the KNE Fairfax Alignment is forecasted to be 52,900 daily project trips in the year 2045. Forecasted ridership demonstrates that operation of the alignment would provide a measurable benefit to transit riders in the corridor. The alignment is consistent with all the programs and policies addressing transit circulation in the RSA, as well as Metro plans and policies that address transit development and operations, including the 2020 LRTP, Vision 2028, and Measure M guidelines.
- Roadways: The goals of the jurisdictions related to roadways in the region include implementing complete streets features, improving mobility for all modes of transportation, and reducing VMT. The alignment would not conflict with those goals and would advance the goals pertaining to reduction of VMT by reducing regional VMT. The alignment would operate underground, and light rail vehicle operations would not change vehicular circulation on roadways in the RSA.

Parking facilities would not be provided at stations, and the majority of riders are anticipated to access stations via transit, walking, or bicycling. While some passengers would access stations via vehicular pick-up or drop-off, it is anticipated to be a small percentage of overall access, and curbside drop-off/pick-up would be managed in accordance with local plans and policies per project measure PM TRA-1.

- Bicycle and Pedestrian Circulation: Jurisdictions in the region have set goals to expand, improve, and provide an interconnected system of bikeways and support facilities, to provide and maintain high-quality pedestrian access, and to implement a balanced transportation system through their plans and policies. The alignment would not conflict with the plans and policies that prioritize bicycle and pedestrian access and would not preclude expansion and improvement of bicycle and pedestrian facilities in the RSA. In addition, as described in project measure PM TRA-1, Metro would engage in first/last mile planning with local jurisdictions to enhance safety of pedestrian and bicyclist station access.

For the reasons described above, the alignment would not conflict with programs, plans, ordinances, or policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.16.7.1.3 KNE LA BREA ALIGNMENT

3.16.7.1.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE La Brea Alignment would involve temporary transit, roadway, bicycle, and pedestrian circulation changes due to street and sidewalk closures, and possible relocation of bus stops in the RSA. Street closures would be concentrated in areas that would require cut-and-cover construction, including station boxes, crossover structures, connection boxes, and TBM retrieval sites. Street closures, especially full street closures, could disrupt transit service, roadway circulation, and bicycle facilities. To the extent feasible, full street closures would be limited to weekends, while partial closures may occur for several months at a time. The locations and durations of street closures, haul routes, and other construction activities that could impact the transportation network are summarized in Appendix 2-C, Construction Approach Report.

The construction impacts on the RSA circulation system, including transit facilities, roadways, and bicycle and pedestrian circulation, are summarized below.

- Transit: During construction of the alignment, possible street closures might require temporarily relocating existing bus stops and rerouting buses. Possible delays and increased travel times could occur due to construction zones and temporary lane closures. In addition to street closures, service along the Metro B, D, E, and K Lines would be temporarily affected while the project's connections are being constructed. Partial closures would occur at the Metro B, D, E, and K Line stations and tracks, and access to entrances would be limited during construction. These partial closures would mostly occur during nights and weekends.
- Roadways: During construction of the alignment, detours associated with the temporary street and lane closures would change the vehicular circulation in the RSA and would result in

temporary access limitations. The additional construction-related traffic could result in queuing issues at the I-10/Crenshaw Boulevard interchange exit ramps. Construction activities at selected areas such as the Crenshaw/Adams Station and the La Brea/Santa Monica Station, which are near Caltrans facilities, would require coordination with Caltrans. The proposed haul routes and truck freeway access locations would be finalized in coordination with Caltrans. It is anticipated that, due to the nature of the construction activity, the road network near the TBM launch sites would experience higher levels of construction-related traffic.

- Bicycle and Pedestrian Circulation: Construction of the KNE La Brea Alignment would not conflict with the plans and policies that prioritize bicycle and pedestrian access and would not preclude expansion and improvement of bicycle and pedestrian facilities in the RSA. However, construction activities would temporarily restrict access to bicycle and pedestrian facilities in the RSA. Sidewalks in the RSA would be affected by either full or partial street closures.

As described in project measure PM TRA-2, a construction TMP would be prepared in coordination with all local jurisdictions affected by construction. The TMP would include information on bus detours and relocated stops, and as well as the partial closures and limited access at the affected Metro B, D, E, and K Line stations. The TMP would include information on street and lane closures, duration of these closures, and detour routes. Warning signs and media alerts would be used to inform transit users, motorists, bicyclists, and pedestrians of the upcoming closures and the duration of such closures. The alignment would be constructed per applicable state, Metro, and city design criteria and standards.

For the reasons described above, the alignment would not conflict with programs, plans, ordinances, or policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.16.7.1.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. The KNE La Brea Alignment would create a new transit connection and would increase mobility to communities in the region. The alignment is not in conflict with any regional or local jurisdictions' policies, and the project is included in the Metro LRTP.

The operational impacts on the RSA circulation system, including transit facilities, roadways, and bicycle and pedestrian circulation, are summarized below.

- Transit: Jurisdictions in the region have set goals to improve mobility, encourage the use of transit, and provide affordable and efficient transit services through their plans and policies. The alignment would extend the Metro K Line from the E Line to the D and B Lines, enhancing transit connectivity. The estimated ridership for the KNE La Brea Alignment is forecasted to be 47,200 daily project trips in the year 2045. Forecasted ridership demonstrates that operation of the alignment would provide a measurable benefit to transit riders in the corridor. The alignment is consistent with all the programs and policies addressing transit circulation in the RSA, as well as Metro plans and policies that address transit development and operations, including the 2020 LRTP, Vision 2028, and Measure M guidelines.

- Roadways: The goals of the jurisdictions related to roadways in the region include implementing complete streets features, improving mobility for all modes of transportation, and reducing VMT. The alignment would not conflict with those goals and would advance the goals pertaining to reduction of VMT by reducing regional VMT. The alignment would operate underground, and light rail vehicle operations would not change vehicular circulation on roadways in the RSA. Parking facilities would not be provided at stations, and the majority of riders are anticipated to access stations via transit, walking, or bicycling. While some passengers would access stations via vehicular pick-up or drop-off, it is anticipated to be a small percentage of overall access, and curbside drop-off/pick-up would be managed in accordance with local plans and policies per project measure PM TRA-1.
- Bicycle and Pedestrian Circulation: Jurisdictions in the region have set goals to expand, improve, and provide an interconnected system of bikeways and support facilities, to provide and maintain high-quality pedestrian access, and to implement a balanced transportation system through their plans and policies. The alignment would not conflict with the plans and policies that prioritize bicycle and pedestrian access and would not preclude expansion and improvement of bicycle and pedestrian facilities in the RSA. In addition, as described in project measure PM TRA-1, Metro would engage in first/last mile planning with local jurisdictions to enhance safety of pedestrian and bicyclist station access.

For the reasons described above, the alignment would not conflict with programs, plans, ordinances, or policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.16.7.1.4 HOLLYWOOD BOWL DESIGN OPTION

3.16.7.1.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the Hollywood Bowl Design Option would result in fewer street closures than other proposed alignments because the Hollywood Bowl Station would be constructed using the sequential excavation method (SEM), which would avoid cut-and-cover methods in the street. Construction activities at the Hollywood Bowl Station would be near Caltrans facilities and would require coordination with Caltrans. The proposed haul routes and truck freeway access locations would be finalized in coordination with Caltrans. Construction staging activities would not be directly located at the current Hollywood Bowl shuttle drop-off sites; however, because of the size of the proposed construction areas and the anticipated activity, Metro would need to coordinate with the Hollywood Bowl on circulation and access during construction of the design option.

Per project measure PM TRA-2, a construction TMP would be prepared in coordination with all local jurisdictions affected by construction. The TMP would include information on bus detours and relocated stops. Warning signs would also be installed to inform transit users of upcoming closures and the duration of such closures. The design option would be constructed per applicable state, Metro, and city design criteria and standards, and construction would not conflict with programs, plans, ordinances, or policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.16.7.1.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. The Hollywood Bowl Design Option, like the alignments, would create a new transit connection, increasing mobility to communities in the region and providing an additional station at the Hollywood Bowl. It would not conflict with any regional or local jurisdictions' policies. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.16.7.1.5 MAINTENANCE AND STORAGE FACILITY

3.16.7.1.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The MSF would be located adjacent to the existing Metro Division 16. Construction of the MSF would involve temporary partial street closures, possible relocation of bus stops, and temporary restriction of access to bicycle and pedestrian facilities. The proposed haul routes would access the regional freeway system through the I-405/Century Boulevard interchange. The proposed haul routes and truck freeway access locations would be finalized in coordination with Caltrans. The Los Angeles World Airports Automated People Mover will operate in the vicinity of the MSF; however, construction of the MSF is not expected to interfere with Automated People Mover operations.

Per project measure PM TRA-2, a construction TMP would be developed by the contractor before initiating construction activity, and the TMP would be submitted to Metro and other reviewing agencies for approval. The TMP would identify alternate routes and safe access for all users. As a result, the MSF would not conflict with programs, plans, ordinances, or policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Therefore, the MSF would have a less than significant impact during construction.

3.16.7.1.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the MSF would not conflict with any regional or local jurisdictions' policies. As set forth in project measure PM TRA-1, any driveway associated with the MSF would be designed according to applicable state, Metro, and city design criteria and standards. Operation of the MSF is not expected to interfere with the Los Angeles World Airports Automated People Mover operations. Therefore, the MSF would have a less than significant impact during operation.

3.16.7.2 IMPACT TRA-2: CONSISTENCY WITH CEQA GUIDELINES

Impact TRA-2: Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

3.16.7.2.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.16.7.2.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. During construction, the KNE San Vicente–Fairfax Alignment would generate additional VMT related to construction activities. The additional employee trips associated with the construction activity would be temporary, and the additional VMT would be insignificant compared to the 2045 without Project Conditions. As a result, the alignment would be consistent with CEQA Guidelines Section 15064.3, subdivision (b). Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.16.7.2.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. Per the Office of Planning and Research's technical advisory (California Governor's Office of Planning and Research 2018), transit projects are presumed to cause a less than significant impact on transportation. Based on Metro's travel demand model and as shown in Table 3.16-16, the alignment is forecasted to result in a net reduction of approximately 135,500 daily VMT when compared to the 2045 without Project Conditions. As a result, the alignment would be consistent with CEQA Guidelines Section 15064.3, subdivision (b). Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

TABLE 3.16-16. KNE SAN VICENTE– FAIRFAX ALIGNMENT – DAILY VMT REDUCTION

REGION	2045 WITHOUT PROJECT	2045 KNE SAN VICENTE–FAIRFAX ALIGNMENT	DIFFERENCE
Los Angeles County	263,676,685	263,541,206	-135,479
SCAG Region	586,683,502	586,548,027	-135,475

Source: Connect Los Angeles Partners 2023
SCAG = Southern California Association of Governments; VMT = vehicle miles traveled

3.16.7.2.2 KNE FAIRFAX ALIGNMENT

3.16.7.2.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. During construction, the KNE Fairfax Alignment would generate additional VMT related to construction activities. The additional employee trips associated with the construction activity would be temporary, and the additional VMT would be insignificant compared to the 2045 without Project Condition. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.16.7.2.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. Per the Office of Planning and Research's technical advisory (California Governor's Office of Planning and Research 2018), transit projects are presumed to cause a less than significant impact on transportation. Based on Metro's travel demand model and as shown in Table 3.16-17, the alignment is forecasted to result in a net reduction of approximately 127,500 daily VMT when compared to the 2045 without Project Conditions. As a result, the alignment would be consistent with CEQA Guidelines Section 15064.3, subdivision (b). Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

TABLE 3.16-17. KNE FAIRFAX ALIGNMENT – DAILY VMT REDUCTION

REGION	2045 WITHOUT PROJECT	2045 KNE FAIRFAX ALIGNMENT	DIFFERENCE
Los Angeles County	263,676,685	263,549,218	-127,467
SCAG Region	586,683,502	586,556,053	-127,449

Source: Connect Los Angeles Partners 2023
SCAG = Southern California Association of Governments; VMT = vehicle miles traveled

3.16.7.2.3 KNE LA BREA ALIGNMENT

3.16.7.2.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. During construction, the KNE La Brea Alignment would generate additional VMT related to construction activities. The additional employee trips associated with the construction activity would be temporary, and the additional VMT would be insignificant compared to the 2045 without Project Condition. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.16.7.2.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. Per the Office of Planning and Research's technical advisory (California Governor's Office of Planning and Research 2018), transit projects are presumed to cause a less than significant impact on transportation. Based on Metro's travel demand model and as shown in Table 3.16-18, the alignment is forecasted to result in a net reduction of approximately 135,500 daily VMT when compared to the 2045 without Project Conditions. As a result, the alignment would be consistent with CEQA Guidelines Section 15064.3, subdivision (b). Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

TABLE 3.16-18. KNE LA BREA ALIGNMENT – DAILY VMT REDUCTION

REGION	2045 WITHOUT PROJECT	2045 KNE LA BREA ALIGNMENT	DIFFERENCE
Los Angeles County	263,676,685	263,541,193	-135,492
SCAG Region	586,683,502	586,548,004	-135,498

Source: Connect Los Angeles Partners 2023
SCAG = Southern California Association of Governments; VMT = vehicle miles traveled

3.16.7.2.4 HOLLYWOOD BOWL DESIGN OPTION

3.16.7.2.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the Hollywood Bowl Design Option would involve construction of an additional station compared to the alignments and would generate additional VMT related to construction activities. However, as discussed previously, this additional VMT would be temporary and considered insignificant compared to the 2045 without Project Condition. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.16.7.2.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. The design option would extend the alignment to the north by approximately one mile, and like the alignments, it would contribute to a reduction in VMT. Table 3.16-19 shows a net reduction of approximately 127,600 daily VMT for the design option with the KNE Fairfax Alignment when compared to the 2045 without Project Conditions. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

TABLE 3.16-19. HOLLYWOOD BOWL DESIGN OPTION (WITH THE FAIRFAX ALIGNMENT) – DAILY VMT REDUCTION

REGION	2045 WITHOUT PROJECT	2045 KNE FAIRFAX ALIGNMENT WITH DESIGN OPTION	DIFFERENCE
Los Angeles County	263,676,685	263,549,091	-127,594
SCAG Region	586,683,502	586,555,925	-127,577

Source: Connect Los Angeles Partners 2023
SCAG = Southern California Association of Governments; VMT = vehicle miles traveled

3.16.7.2.5 MAINTENANCE AND STORAGE FACILITY

3.16.7.2.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the MSF would involve construction of trackwork, buildings, and fences, which would generate additional VMT related to construction activities. This additional VMT would be temporary and considered insignificant compared to the 2045 without Project Condition. Therefore, the MSF would have a less than significant impact during construction.

3.16.7.2.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. The MSF would provide equipment and facilities to accommodate daily servicing and cleaning, inspection and repairs, and storage of light rail vehicles that are not in service. The MSF would be the primary physical employment center for rail operation employees, including train operators, maintenance workers, supervisors, administrators, security personnel, and other roles. The employee trips generated by the MSF would result in additional VMT. However, the MSF would be considered a part of the proposed transit extension project and not a standalone project. As discussed

previously, transit projects are presumed to cause a less than significant impact on transportation per the Office of Planning and Research's technical advisory. In addition, the VMT reductions resulting from any of the alignments would offset the operational VMT associated with the MSF. Therefore, the MSF would have a less than significant impact during operation.

3.16.7.3 IMPACT TRA-3: GEOMETRIC DESIGN HAZARDS AND INCOMPATIBLE USES

Impact TRA-3: Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

3.16.7.3.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.16.7.3.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE San Vicente–Fairfax Alignment would involve partial or full temporary street closures, possible temporary closures of sidewalks, and increased heavy vehicle and equipment operations on public streets in the proximity of pedestrians and passenger vehicles. Per project measure PM TRA-2, a construction TMP would be developed in coordination with local jurisdictions before initiating construction activity. The TMP would include street closure information, detour plans, haul routes, staging information, and traffic control strategies. Working areas would be fenced, barricaded, and monitored. Temporary advance warning signs and detour signs would be installed per the latest California MUTCD standards and as approved in the TMP. All construction work activities would be conducted in compliance with OSHA, California OSHA, and Metro safety and security programs. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.16.7.3.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. The KNE San Vicente–Fairfax Alignment would operate in an underground alignment with stations providing access to the surface. The stations and the alignment would be designed, constructed, and operated consistent with all applicable standards and design criteria, as set forth under project measure PM TRA-1. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.16.7.3.2 KNE FAIRFAX ALIGNMENT

3.16.7.3.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE Fairfax Alignment would involve partial or full temporary street closures, possible temporary closures of sidewalks, and increased heavy vehicle and equipment operations on public streets in the proximity of pedestrians and passenger vehicles. As set forth in PM TRA-2, a construction TMP would be developed in coordination with local jurisdictions before initiation of construction activity. The TMP would include street closure information, detour plans, haul routes, staging information, and traffic control strategies. Working areas would be fenced, barricaded, and monitored. Temporary advance warning signs and detour signs would be installed per the latest

California MUTCD standards and as approved in the TMP. All construction work activities would be conducted in compliance with OSHA, California OSHA, and Metro safety and security programs. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.16.7.3.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. The KNE Fairfax Alignment would operate in an underground alignment with stations providing surface access. The stations and the alignment would be designed, constructed, and operated consistent with all applicable standards and design criteria as set forth in PM TRA-1. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.16.7.3.3 KNE LA BREA ALIGNMENT

3.16.7.3.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE La Brea Alignment would involve partial or full temporary street closures, possible temporary closures of sidewalks, and increased heavy vehicle and equipment operations on public streets in the proximity of pedestrians and passenger vehicles. As set forth in PM TRA-2, a construction TMP would be developed in coordination with local jurisdictions before initiation of construction activity. The TMP would include street closure information, detour plans, haul routes, staging information, and traffic control strategies. Working areas would be fenced, barricaded, and monitored. Temporary advance warning signs and detour signs would be installed per the latest California MUTCD standards and as approved in the TMP. All construction work activities would be conducted in compliance with OSHA, California OSHA, and Metro safety and security programs. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.16.7.3.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. The KNE La Brea Alignment would operate in an underground alignment with stations providing surface access. The stations and the alignment would be designed, constructed, and operated consistent with all applicable standards and design criteria as set forth in PM TRA-1. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.16.7.3.4 HOLLYWOOD BOWL DESIGN OPTION

3.16.7.3.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the Hollywood Bowl Design Option would involve partial or full temporary street closures, possible temporary closures of sidewalks, and increased heavy vehicle and equipment operations on public streets in the proximity of pedestrians and passenger vehicles. As set forth in PM TRA-2, a construction TMP would be developed by the contractor before initiation of construction activity, and it would be submitted to Metro and other reviewing agencies for approval. The TMP would include street closure information, detour plans, haul routes, staging information, and traffic control strategies. Working areas would be fenced, barricaded, and monitored. Temporary advance warning signs and detour signs would be installed per the latest California MUTCD standards and as

approved in the TMP. All construction work activities would be conducted in compliance with OSHA, California OSHA, and Metro safety and security programs. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.16.7.3.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. The Hollywood Bowl Design Option would operate in an underground alignment. The stations and the alignment would be designed, constructed, and operated consistent with all applicable standards and design criteria as set forth in PM TRA-1. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.16.7.3.5 MAINTENANCE AND STORAGE FACILITY

3.16.7.3.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The MSF would be located adjacent to the existing Metro Division 16, and the connection with the existing tracks would not require crossing or permanent closure of streets. Construction of the MSF would involve partial or full temporary street closures, possible temporary closures of sidewalks, and increased heavy vehicle and equipment operations on public streets in the proximity of pedestrians and passenger vehicles. Per PM TRA-2, a construction TMP would be developed by the contractor before initiating construction activity, and it would be submitted to Metro and other reviewing agencies for approval. The TMP would include street closure information, detour plans, haul routes, staging information, and traffic control strategies. Working areas would be fenced, barricaded, and monitored. Temporary advance warning signs and detour signs would be installed per the latest California MUTCD standards and as approved in the TMP. All construction work activities would be conducted in compliance with OSHA, California OSHA, and Metro safety and security programs. Therefore, the MSF would have a less than significant impact during construction.

3.16.7.3.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. The MSF would be located adjacent to the existing rail yard. The MSF would be designed and operated consistently with all applicable standards and design criteria as set forth under project measure PM TRA-1, and it would not substantially increase hazards due to a geometric design feature or incompatible use. Therefore, the MSF would have a less than significant impact during operation.

3.16.7.4 IMPACT TRA-4: EMERGENCY ACCESS

Impact TRA-4: Would the project result in inadequate emergency access?

3.16.7.4.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.16.7.4.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. As a result of the construction-related street closures, traffic congestion could increase on the detour routes and could result in delayed police and fire response times and

decreased access to emergency services. Cedars-Sinai Medical Center and Emergency Room are located near the La Cienega/Beverly Station; LACFD Station #7 is near the San Vicente/Santa Monica Station and LACFD Station #8 is located near the Fairfax/Santa Monica and La Brea/Santa Monica Stations; and the LAPD Wilshire Station is located near the Midtown Crossing Station. In addition, the Los Angeles County Sheriff's Department West Hollywood Station is located where construction for the San Vicente/Santa Monica Station is planned, and the sheriff's station would be relocated. However, as discussed in Section 3.15, Public Services and Recreation, relocation of the West Hollywood Sheriff's Station would occur prior to construction of the San Vicente/Santa Monica Station. The construction TMP, as set forth in project measure PM TRA-2, would provide advance notification of roadway closures and identify potential detour routes so emergency service providers in the area could avoid the closures, as possible. All construction work activities would be conducted in compliance with OSHA, California OSHA, and Metro safety and security programs, which would ensure that adequate emergency access around the construction sites is maintained. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.16.7.4.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. The KNE San Vicente–Fairfax Alignment would operate in an underground alignment and would not interfere with the emergency services in the area. The stations and the alignment would be designed and operated consistent with all applicable standards and design criteria as set forth in project measure PM TRA-1. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.16.7.4.2 KNE FAIRFAX ALIGNMENT

3.16.7.4.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE Fairfax Alignment would involve temporary street closures. Los Angeles County Fire Department Station #8 is located near the Fairfax/Santa Monica and La Brea/Santa Monica Stations, and the Los Angeles Police Department Wilshire Station is located near the Midtown Crossing Station. As a result of the construction-related street closures, traffic congestion could increase on the detour routes and could result in delayed police and fire response times and decreased access to emergency services. However, the construction TMP, as set forth in PM TRA-2, would provide advance notification of such closures and identify potential detour routes so emergency service providers in the area could avoid the closures, if possible. All construction work activities would be conducted in compliance with OSHA, California OSHA, and Metro safety and security programs, which would ensure that adequate emergency access around the construction sites is maintained. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.16.7.4.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. The KNE Fairfax Alignment would operate in an underground alignment and would not interfere with the emergency services in the area. The stations and the alignment would be

designed and operated consistent with all applicable standards and design criteria as set forth in PM TRA-1. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.16.7.4.3 KNE LA BREA ALIGNMENT

3.16.7.4.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE La Brea Alignment would involve temporary street closures. Los Angeles County Fire Department Station #8 is located west of the La Brea/Santa Monica Station, and the Los Angeles Police Department Wilshire Station is located near the Midtown Crossing Station. As a result of the construction-related street closures, traffic congestion could increase on the detour routes and could result in delayed police and fire response times and decreased access to emergency services. However, the construction TMP, as set forth in PM TRA-2, would provide advance notification of such closures and identify potential detour routes so emergency service providers in the area could avoid the closures, if possible. All construction work activities would be conducted in compliance with OSHA, California OSHA, and Metro safety and security programs, which would ensure that adequate emergency access around the construction sites is maintained. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.16.7.4.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. The KNE La Brea Alignment would operate in an underground alignment and would not interfere with the emergency services in the area. The stations and the alignment would be designed and operated consistent with all applicable standards and design criteria as set forth in PM TRA-1. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.16.7.4.4 HOLLYWOOD BOWL DESIGN OPTION

3.16.7.4.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the Hollywood Bowl Design Option would involve temporary street closures. As a result, traffic congestion could increase on the detour routes and could result in delayed police and fire response times and decreased access to emergency services. However, the construction TMP, as set forth in PM TRA-2, would provide advance notification of such closures and identify potential detour routes so emergency service providers in the area could avoid the closures, if possible. All construction work activities would be conducted in compliance with OSHA, California OSHA, and Metro safety and security programs, which would ensure that adequate emergency access around the construction sites is maintained. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.16.7.4.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. The Hollywood Bowl Design Option would operate in an underground alignment and would not interfere with the emergency services in the area. The stations and the alignment would be designed and operated consistent with all applicable standards and design criteria as

set forth in PM TRA-1. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.16.7.4.5 MAINTENANCE AND STORAGE FACILITY

3.16.7.4.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the MSF would involve temporary street closures. As a result, traffic congestion could increase on the detour routes and could result in delayed police and fire response times and decreased access to emergency services. However, the construction TMP, as set forth in project measure PM TRA-2, would provide advance notification of such closures and identify potential detour routes so emergency service providers in the area could avoid the closures, if possible. All construction work activities would be conducted in compliance with OSHA, California OSHA, and Metro safety and security programs, which would ensure that adequate emergency access around the construction sites is maintained. Therefore, the MSF would have a less than significant impact during construction.

3.16.7.4.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. The MSF would be located adjacent to the existing rail yard. Operation of the MSF would not interfere with the emergency services in the RSA. Additional KNE light rail vehicles would enter and exit service at the MSF via the existing grade crossing for Division 16, consistent with how the current K Line light rail vehicles enter and exit service. The increase of light rail vehicles using at-grade crossings in the vicinity of the MSF would be spread over time periods when light rail vehicles enter and exit service, but could occur during an emergency service response. Any traffic delays would be short, taking only the time for the light rail vehicle to make the roadway crossing. Emergency service dispatch has real-time traffic conditions, so the potential for emergency service response delay is small. In addition, as set forth in project measure PM TRA-1, any driveway access associated with the MSF would be designed according to applicable state, Metro, and city design criteria and standards as set forth in project measure PM TRA-1. Therefore, the MSF would have a less than significant impact during operation.

3.16.7.5 MITIGATION MEASURES

As the impact analysis above demonstrates, construction and operation of any of the KNE alignments and stations, the design option, and the MSF would result in less than significant impacts related to transportation. Therefore, no mitigation is required under CEQA.

3.16.7.6 SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

Table 3.16-20 summarizes the transportation impact significance conclusions and, if applicable, mitigation measures. As indicated above, there are no significant transportation impacts that would require mitigation.

TABLE 3.16-20. KNE SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

IMPACT		IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES				
		KNE SAN VICENTE–FAIRFAX ALIGNMENT	KNE FAIRFAX ALIGNMENT	KNE LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MAINTENANCE AND STORAGE FACILITY
Impact TRA-1: Consistency with Policies	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
Impact TRA-2: Consistency with CEQA Guidelines	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
Impact TRA-3: Geometric Design Hazards and Incompatible Uses	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
Impact TRA-4: Emergency Access	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS

Source: Connect Los Angeles Partners 2024
LTS = less than significant

3.17 TRIBAL CULTURAL RESOURCES

3.17.1 INTRODUCTION

This discussion provides an evaluation of K Line Northern Extension (KNE) as it relates to tribal cultural resources (TCRs). It includes descriptions of the federal, state, and local regulatory setting, existing conditions, and the impacts from construction and operation of the proposed alignments and stations, design option, and maintenance and storage facility (MSF), as well as mitigation measures where applicable. For more detailed information, refer to the KNE Tribal Cultural Resources Technical Report (Appendix 3.17-A).

3.17.2 REGULATORY FRAMEWORK

3.17.2.1 FEDERAL

The following federal laws and regulations are relevant to construction and operation of the project:

- National Historic Preservation Act (54 United States Code 300101 et seq.), which establishes the National Register of Historic Places (NRHP)

3.17.2.2 STATE

The following state laws and regulations are relevant to construction and operation of the project:

- California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Sections 21000 et seq.) and the CEQA Guidelines (Title 14, California Code of Regulations, Sections 15000 et seq.)
- California Register of Historical Resources (CRHR)
- California State Assembly Bill 52 (AB 52)
- California Health and Safety Code Section 7050.5
- California PRC Sections 5097.94 and 5097.98
- California Native American Graves Protection and Repatriation Act

3.17.2.3 REGIONAL

No regional regulations are applicable to the project regarding TCRs.

3.17.2.4 LOCAL

The following local codes, ordinances, and general plans are relevant to construction and operation of the project:

- Los Angeles County Historic Preservation Ordinance
- City of Los Angeles Environmental Quality Act Guidelines (1981, amended July 31, 2002)

- City of Los Angeles Administrative Code, Division 22, Chapter 9, Article 1 (Ordinance No. 178402), 1962
- City of Los Angeles Municipal Code, Chapter I, Article 2, Section 12.20.3 (Ordinance No. 175891), 1979 (amended 2004)
- City of Los Angeles General Plan, Conservation Element, 2001

3.17.3 METHODOLOGY

3.17.3.1 CEQA METHODOLOGY

The purpose of this analysis is to evaluate the project against CEQA thresholds of significance as the basis for determining the level of impacts related to TCRs. The methodology for this analysis includes the delineation of a resource study area (RSA), consultation with Native American tribes traditionally and culturally affiliated with the RSA and vicinity, and identification of potential TCRs through archival research and a targeted field survey.

3.17.3.2 SIGNIFICANCE THRESHOLDS

In accordance with Appendix G of the 2022 CEQA Guidelines, the project would have a significant impact related to TCRs if it would cause a substantial adverse change in the significance of a TCR, defined in PRC Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- Impact TCR-1: Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or
- Impact TCR-2: A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

3.17.4 RESOURCE STUDY AREA

The RSA for TCRs was delineated based on the proposed physical configuration of the alignments and stations, design option, and MSF, including all areas where temporary or permanent ground disturbance and property acquisitions may occur. The RSA is defined as the area necessary to construct, operate, and maintain the alignments and stations, design option, and MSF, and includes all proposed right-of-way, acquisition, and construction areas. The RSA is shown on Figure 3.17-1.

3.17.5 EXISTING SETTING

This existing setting discussion summarizes current conditions related to TCRs within and near the KNE RSA.

3.17.5.1 REGIONAL SETTING

The project is located in a relatively flat area of the Los Angeles Basin. The basin is surrounded by the Santa Monica Mountains to the northwest, the San Gabriel Mountains to the north, and the San Bernardino and San Jacinto Mountains to the east. The basin was formed by alluvial and fluvial deposits derived from these surrounding mountains. Today, the vicinity of the project is a densely populated and heavily developed city landscape.

3.17.5.1.1 GEOLOGIC SETTING

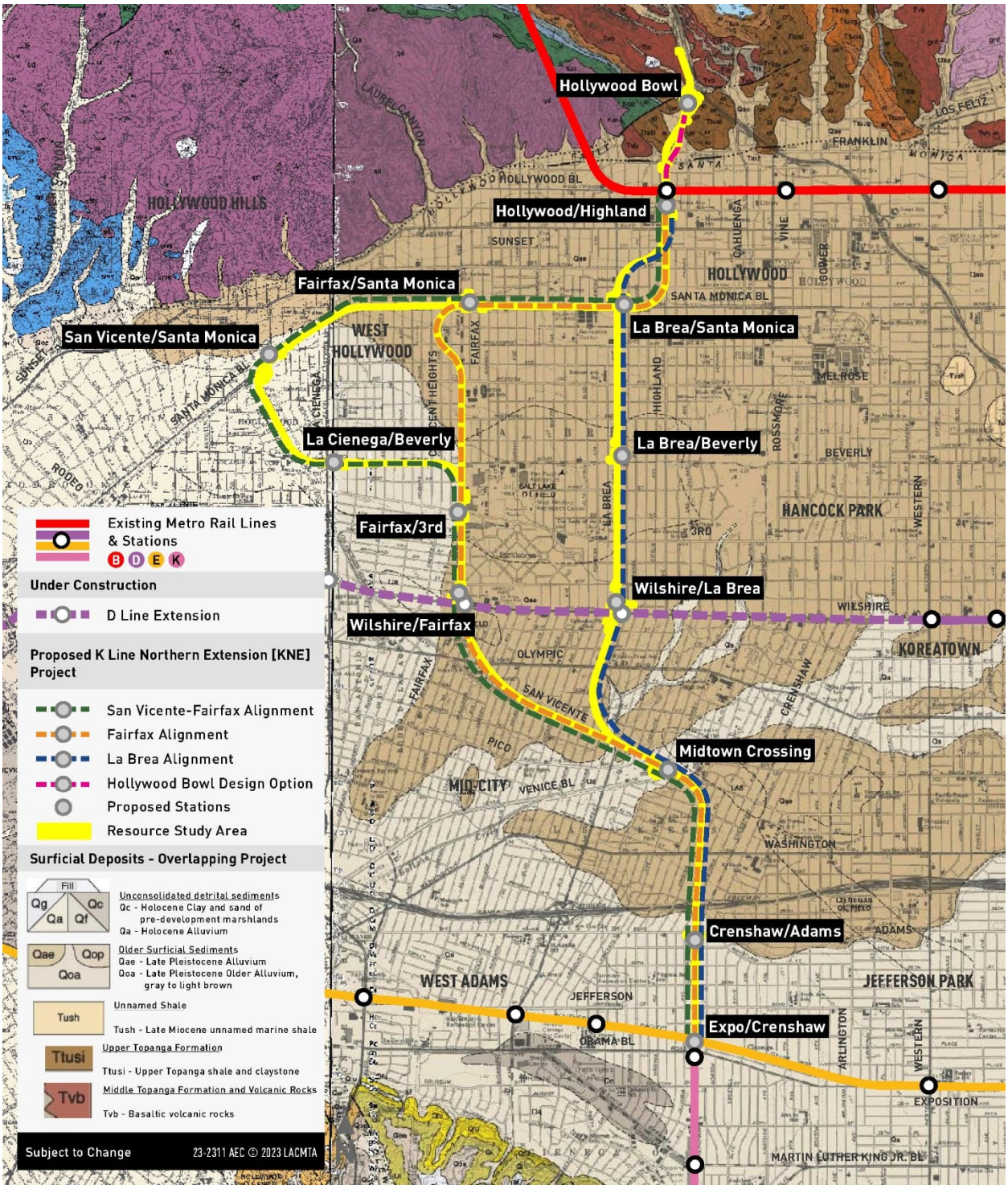
Geologic mapping indicates that most of the surface in the vicinity of the project is covered with Pleistocene-aged (11,700 BP to 2.58 Ma) alluvium, alluvial fan, and valley deposits (mapped as Qae in Figure 3.17-2 and Figure 3.17-3). A smaller portion of the project is covered by Holocene-aged (less than 11,700 BP) alluvium mapped as Qa, and at the very northern tip of KNE, outcrops of the Topanga Formation cross the RSA.

Any cultural deposits that are or may have been present within the RSA would likely have been located on or near the surface within younger alluvium (Qa) deposits. These recent alluvial deposits are common throughout the northern half of KNE and are characterized by deposits of gravel and sand that form active parts of alluvial valleys.

FIGURE 3.17-1. RESOURCE STUDY AREA

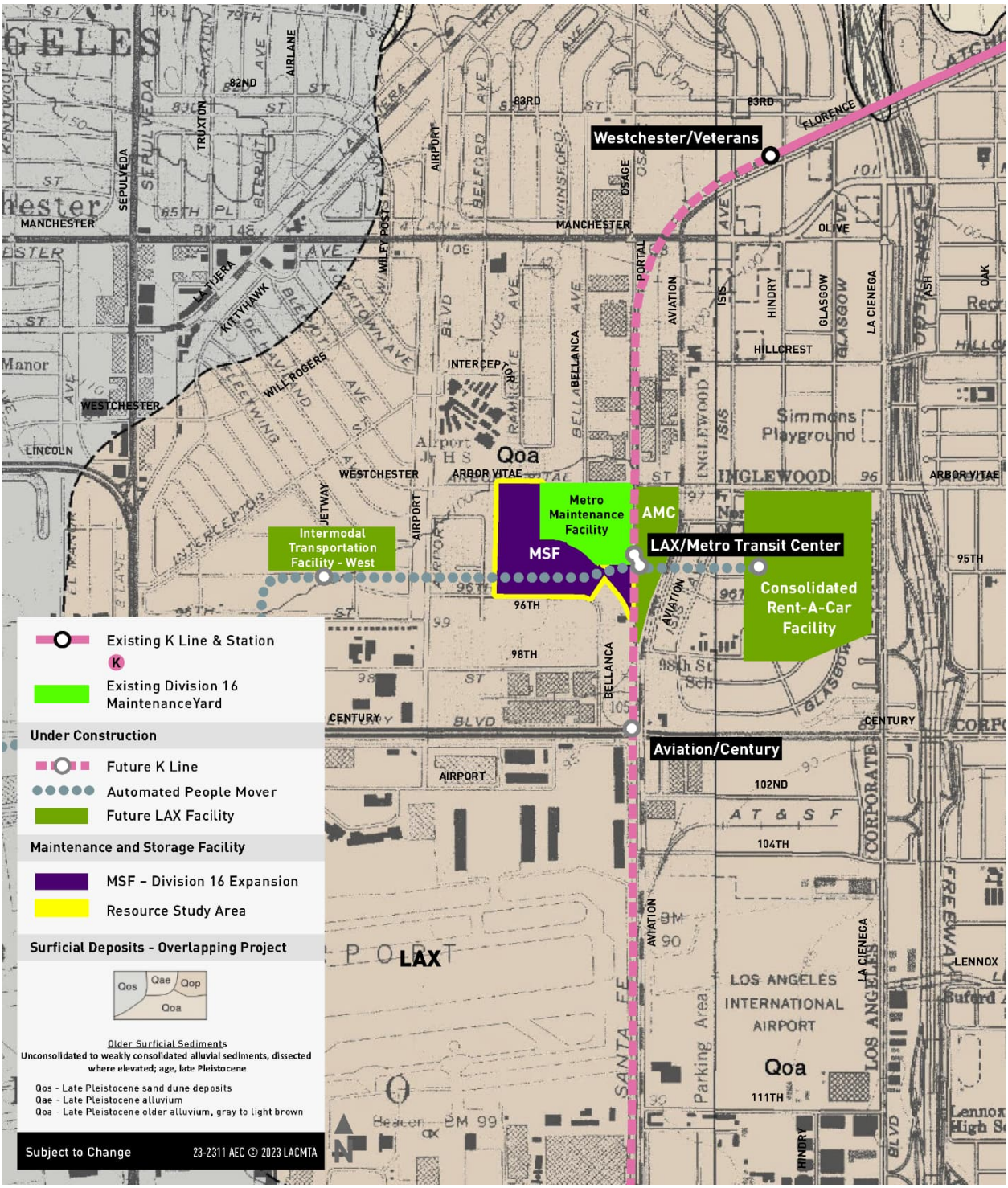
Source: Connect Los Angeles Partners 2024

FIGURE 3.17-2. SURFICIAL DEPOSITS IN THE KNE VICINITY



Source: Yerkes et al. 1965; Connect Los Angeles Partners 2024

FIGURE 3.17-3. SURFICIAL DEPOSITS IN THE VICINITY OF THE MSF



Source: Yerkes et al. 1965; Connect Los Angeles Partners 2024

3.17.5.1.2 PREHISTORIC CONTEXT

The prehistory of the Southern California coastal region is typically divided into Early (8,000 to 3,000 BP), Middle (2,550 to 800 BP), and Late Period (800 to 400 BP), with an initial Paleo-Indian period dating to the late Pleistocene and early Holocene (13,000 to 10,000 BP) (Wallace 1955; Warren 1968).

3.17.5.1.3 HISTORIC CONTEXT

The historical era in California began with Spanish colonization and is often divided into three distinctive chronological and historical periods: the Spanish or Mission Period (1542 to 1821), the Mexican or Rancho Period (1821 to 1848), and the American Period (1848 to present). The history of Los Angeles is characterized by population influx and diversity, as well as infrastructural and architectural developments.

3.17.5.1.4 ETHNOGRAPHIC SETTING

At the time of European contact, the vicinity of the project was occupied by Shoshonean-speaking Gabrieliño people who inhabited what is now the Los Angeles Basin and Orange County down to Aliso Creek (Kroeber 1925). Figure 3.17-4 provides ethnographic tribal boundaries for the Gabrieliño and their neighbors, although it is likely that the territorial boundaries between these linguistically distinct groups fluctuated in prehistoric times.

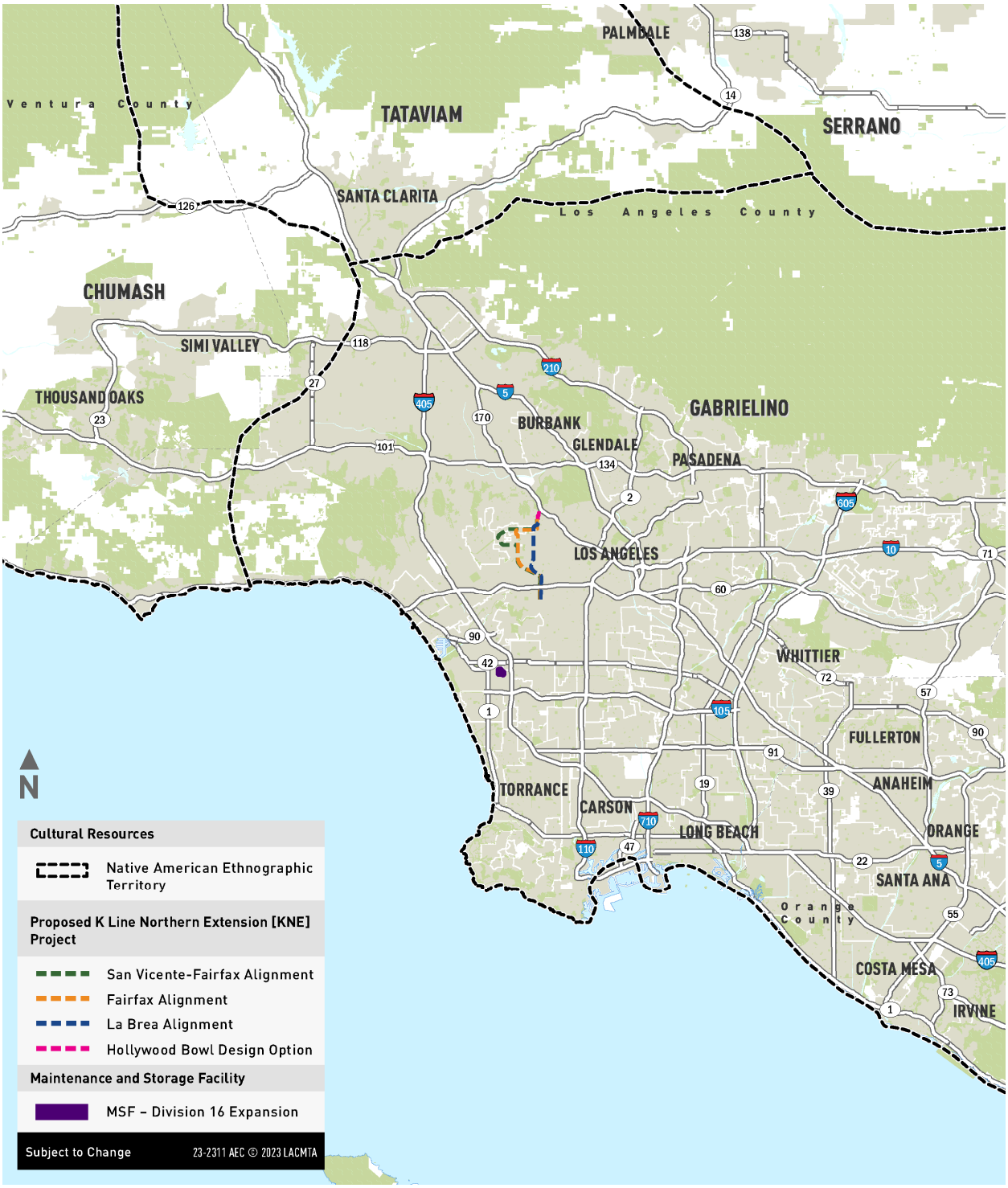
3.17.5.2 INVENTORY RESULTS

This discussion summarizes identification efforts of potential TCRs through archival research, consultation with Native American tribes traditionally and culturally affiliated with the RSA and vicinity, and a targeted field survey.

3.17.5.2.1 ARCHIVAL RESEARCH

Archaeologists who meet the Secretary of the Interior's Professional Qualification Standards (36 Code of Federal Regulations [CFR] Part 61) and are familiar with resources and research considerations within the RSA and vicinity, conducted the archival research for this study. The following sections outline the sources of the archival research.

FIGURE 3.17-4. ETHNOGRAPHIC TRIBAL BOUNDARIES



Source: McCawley 1996; Connect Los Angeles Partners 2024

3.17.5.2.1.1 SOUTH CENTRAL COASTAL INFORMATION CENTER RECORDS SEARCH

A records search for the project was conducted at the South Central Coastal Information Center (SCCIC) of the California Historical Resources Information System, California State University, Fullerton on January 12 and 18, 2023, and on February 22, 2023. The SCCIC, an affiliate of the California Office of Historic Preservation, is the official state repository of cultural resources records and studies for Los Angeles County. The search included a review of all recorded prehistoric archaeological sites within a 0.25-mile radius of the project RSA and a review of all recorded historic archaeological and architectural sites and cultural resource reports on file within a 0.25-mile radius of the RSA. In addition, the California Points of Historical Interest, the California Historical Landmarks, the CRHR, the NRHP, the California State Historic Resources Inventory, and local registers were reviewed, as were historical U.S. Geological Survey quadrangle maps.

The records search identified 144 investigations previously conducted within a 0.25-mile radius of the RSA. Of these, 47 overlap with the RSA. The records search also identified 134 previously recorded cultural resources within a 0.25-mile radius of the RSA. Of these, 128 are historic, five are prehistoric, and one is multi-component. A total of 36 historic-period resources are within the RSA. No previously recorded cultural resources of Native American origin overlap with the RSA.

3.17.5.2.1.2 NATIVE AMERICAN HERITAGE COMMISSION SACRED LANDS FILE SEARCH

In addition to the SCCIC records search, the Native American Heritage Commission (NAHC) conducted a Sacred Lands File (SLF) search on January 19, 2023, to identify Native American cultural resources that may be Traditional Cultural Properties or TCRs that might be affected by the project, as required by CEQA as amended by AB 52. The results of the SLF search indicates that the region contains Native American cultural resources, Traditional Cultural Properties, and/or TCRs.

The NAHC also identified 10 Native American representatives for AB 52 consultation efforts and recommended contacting the Fernandeño Tataviam Band of Mission Indians and the Gabrieleño/Tongva San Gabriel Band of Mission Indians for additional information. The AB 52 tribal consultation list was provided to Metro on January 23, 2023, and includes the following entities:

- Fernandeño Tataviam Band of Mission Indians
- Gabrieleño Band of Mission Indians – Kizh Nation
- Gabrieleño/Tongva San Gabriel Band of Mission Indians
- Gabrieliño/Tongva Nation
- Gabrieliño Tongva Indians of California Tribal Council
- Gabrieliño -Tongva Tribe
- Santa Rosa Band of Cahuilla Indians
- Soboba Band of Luiseño Indians

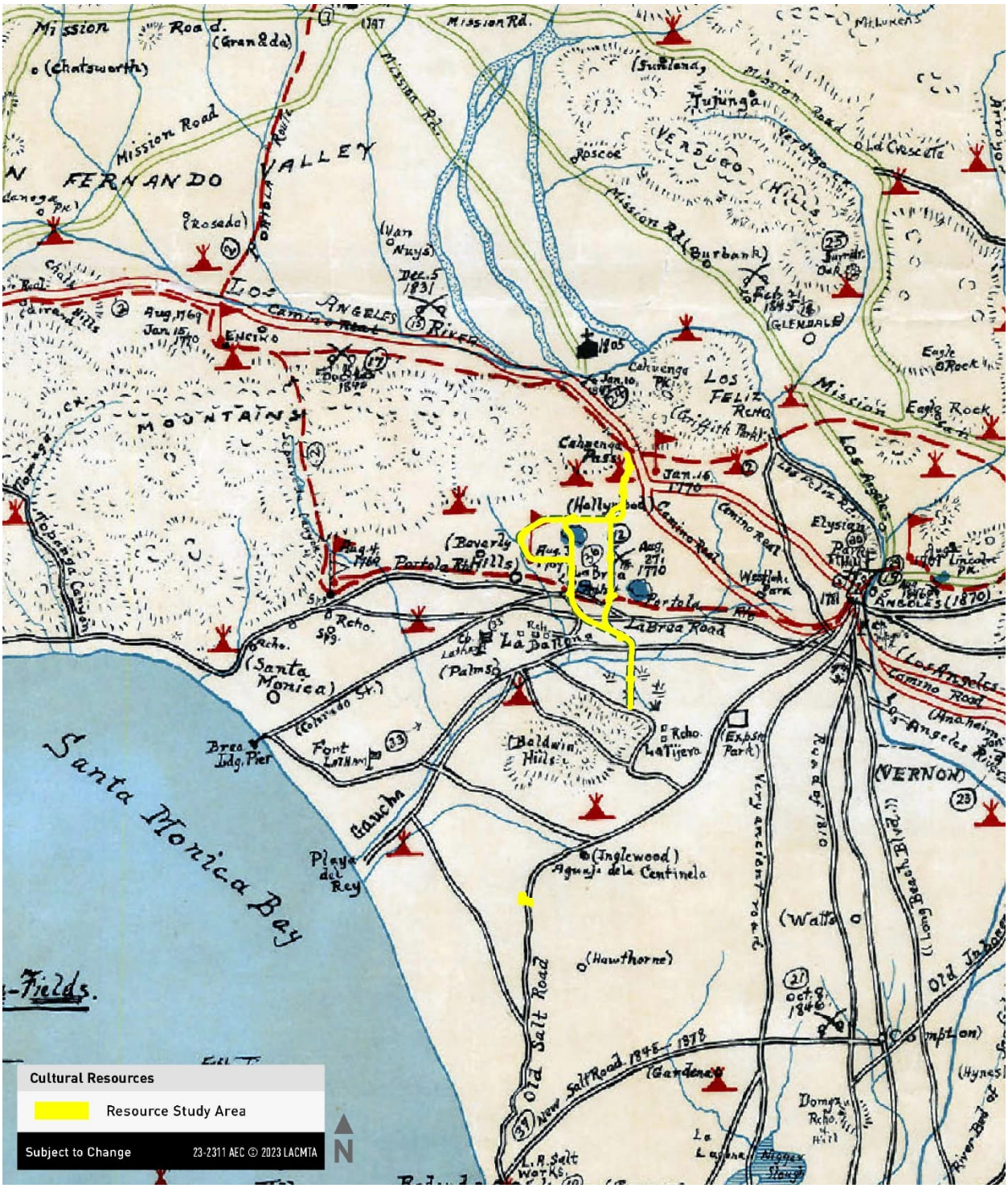
3.17.5.2.1.3 ETHNOGRAPHIC LITERATURE AND HISTORIC MAP REVIEW

A review of primary and secondary ethnographic literature and historic maps was conducted to identify possible locations for TCRs that may not be captured in the SCCIC records search. This review included identification of natural resources and landscape features that may be of interest to tribal communities, historic roads and trails, and village locations and other traditional place names. Sources consulted included General Land Office survey maps; U.S. Geological Survey historical topographic maps; Huntington Library Digital Archives; Library of Congress; and University of California Libraries Online Archive of California.

Gabrieliño villages are reported by early explorers to have been most abundant near the Los Angeles River, in the area north of what is now downtown, known as the Glendale Narrows, and those areas along the river's various outlets into the ocean. The nearest documented villages include Koruuvanga, approximately five miles west of the northern end of the KNE RSA; Maawnga located approximately six miles west; and Ya'angna and Geveronga, which may have been approximately five miles west of the northern extent of the KNE RSA (McCawley 1996). Saa'anga is approximately two miles from the MSF site at the far south end of the project. The project itself does not appear to include any documented historic villages or place names identified in the ethnographic record. However, the full extent and exact location of these villages are not well defined. The Kirkman–Harriman pictorial and historical map of Los Angeles County: 1860 A.D. 1937 A.D. (1938) depicts a variety of historic settlements, trails, and geographic locations (Figure 3.17-5). This illustrated map depicts unnamed villages in the northern vicinity of the KNE RSA that do not appear to correspond with the ethnohistoric settlements discussed above. Two symbols for Native American villages are located at the southwest mouth of Cahuenga Pass, with the northernmost KNE components extending into the area of the eastern village marker in the Hollywood Hills. Another unnamed village symbol is present about 1.6 miles northwest of the western KNE boundary near the confluence of Franklin and Coldwater Canyons. No Rancho or village markers were observed on other historic maps that were reviewed, including General Land Office survey plat maps from the 1870s and 1880s (Bureau of Land Management 2006).

Several trails commonly used by the Gabrieliño and their neighbors, such as the Chumash, Tataviam, and Serrano, have been documented around the Los Angeles Basin. These routes likely served as the foundation of roads, highways, and railroads that developed through time following the colonization of the region by the Spanish (Davis 1961). A map of trails identified in ethnographic literature does not depict any routes in proximity to the project; the closest north-south trail was likely the El Camino Viejo a Los Angeles, located to the east of the project (Davis 1961:5). The Kirkman–Harriman pictorial and historical map of Los Angeles County: 1860 A.D. 1937 A.D. (1938) places the estimated route of the Portolá expedition across the project near the Wilshire/Fairfax and the Wilshire/La Brea station locations. A network of roads is depicted across the region, several of which bisect the RSA, including the La Brea Road.

FIGURE 3.17-5. KIRKMAN–HARRIMAN PICTORIAL AND HISTORICAL MAP OF LOS ANGELES COUNTY



Source: Kirkman and Harriman 1938; Connect Los Angeles Partners 2024

The map scale is fairly large at 1:200,000 and is based off of historic maps and accounts. For this reason, it is useful in indicating that there were historic-period travel routes, likely based on tribal trail networks, in the vicinity of the RSA, although their exact locations are difficult to verify. The 1877 Map of the County of Los Angeles, compiled from U.S. Land Surveys, records of private surveys, and other reliable sources, depicts an overland trail extending through Cahuenga Pass just east of the KNE RSA and the Monte Vista Road extending east/west across Rancho La Brea, intersecting with the project. General Land Office plat maps also depict several road and trail segments within the vicinity of the project, including the east-west Brea Road and the north-south Telegraph Road, which may have intersected the KNE RSA at the northern end in Cahuenga Pass (Bureau of Land Management 2006). No historic trails or travel routes have been formally recorded within the RSA.

The vicinity of the project has been subject to decades of development, and little remains of the flora or fauna endemic to the region. Historically, there were likely patches of useful plant resources in the area, but none remain to indicate what type of gathering or processing activities may have been undertaken by tribes in the area. An 1873 General Land Office survey plat of the area maps patches of cacti and underbrush, and stands of cottonwood, sycamore, and black walnut trees. The Gabrieliño people traditionally used these plants.

Historic maps also indicate the project crosses several unnamed watercourses that drain into the Los Angeles Basin, which would have provided lush riparian corridors with abundant plants and animals used by tribes. The 1894 Los Angeles, California 15-minute quadrangle shows the southern terminus of the project extends to a marshy confluence with standing water from which Ballona Creek flows. The San Vicente/Santa Monica station location is also located in a marshy flat at the confluence of creeks draining from Franklin Canyon, Coldwater Canyon, and other unnamed canyons. These marshy environments would have provided ideal locations for the acquisition of resources. Although many of the watercourses have been eradicated or channelized, historically they would have provided sources of fresh water that created ideal conditions for certain plant resources and local fauna. Temporary camps and activity areas were also commonly established near reliable sources of fresh water. While no known such sites have been identified within 0.25 mile of the RSA, the presence of washes and drainages in the vicinity indicate the potential for encountering TCRs.

The La Brea Tar Pits are located along the central portion of KNE and were a significant mineral deposit used by Native people. The tar pits were an important source of ashphaltum, which was used by Native people to waterproof baskets and boats, among other things. The use of this source by the Gabrieliño people was noted by the Portolá expedition. The remains of a woman dating to at least 9,000 years ago has also been identified within one of the tar pits, attesting to the antiquity of their importance (Fuller et al. 2016).

3.17.5.2.2 AB 52 CONSULTATION

On May 25, 2021, Metro initiated consultation efforts with Native American representatives who were included on the NAHC consultation list. Tribal representatives from the Gabrieleño Band of Mission Indians – Kizh Nation, Gabrieleño/Tongva San Gabriel Band of Mission Indians, Gabrieliño/Tongva Nation, Gabrieliño Tongva Indians of California Tribal Council, and Gabrieliño – Tongva Tribe were informed of

Metro's intent to prepare a Draft Environmental Impact Report for the project. Pursuant to CEQA Guidelines Section 21080.3.1(d), the email correspondence included a brief project description, maps showing the location of the project, and contact information for Metro's designated point of contact.

On March 30, 2023, Metro reinitiated consultation with Native American representatives from the AB 52 list provided by the NAHC as part of the SLF search conducted in January 2023. Mandatory project information—project description, maps, and Metro's point of contact—was distributed to the representatives via email.

On April 5, 2023, the Fernandeño Tataviam Band of Mission Indians requested that Metro complete the mandatory project intake form on-line to determine the level of consultation, if any, required. The tribe provided Metro with its ancestral territory map on April 18, 2023, with instructions to reach out to the tribe for consultation in areas shown within the tribal boundary. Metro determined that the project was outside of the tribal boundary; as such, no further communication was conducted.

On April 12, 2023, the Gabrieleño Band of Mission Indians – Kizh Nation requested consultation. A meeting with Andrew Salas and Matthew Teutimez of the Gabrieleño Band of Mission Indians – Kizh Nation and Roger Martin and Georgia Sheridan of Metro was conducted on June 13, 2023. As a result of the meeting and continuing AB 52 consultation, the tribe shared maps and provided oral history that demonstrated their connection to the Los Angeles County area. They also indicated that their threshold for determining significance differs from the scientific approach archaeologists use. Archaeologists, for example, consider original disposition and context a determining factor of a resource's significance. The tribe, however, believes resources recovered from disturbed soils can be significant and are important. Additionally, the tribe expressed concerns that project mitigation measures adequately protect tribal resources. At this time, consultation with the Gabrieleño Band of Mission Indians – Kizh Nation is ongoing, and additional comments and feedback may be received.

3.17.5.2.3 FIELD SURVEY

A targeted field survey was conducted on March 8 and 17, 2023, by a qualified archaeologist (36 CFR Part 61) to identify archaeological resources in the RSA. Because the RSA is highly urbanized, a desktop review of the RSA was conducted prior to the survey to identify potential areas with exposed ground surface that could be inspected for evidence of material culture. Satellite imagery was used to map undeveloped lots and landscaped areas along roads, sidewalks, and other public areas in the RSA that could be examined for traces of archaeological resources.

Unpaved areas within station locations, tunnel boring machine launch and retrieval sites, construction staging areas, and locations identified during the desktop review were inspected closely during the survey. Where necessary, transects no more than 15 meters wide were walked along unpaved areas. However, most exposed surfaces consisted of narrow landscaping elements that were too small to require transects. Observed soils varied across the survey area but generally consisted of heavily disturbed native soil or imported fill. Vegetation consisted of non-native grasses and non-native landscaping plants, including trees, shrubs, and flowers. Modern or temporally undiagnostic refuse was observed in many locations and included plastic or paper food and beverage container waste, glass

fragments, building materials (e.g., brick, concrete, tile), and various metal scrap. No new or previously documented archaeological resources were observed in the course of the survey.

3.17.5.3 TRIBAL CULTURAL RESOURCES IN THE RESOURCE STUDY AREA

This analysis, consisting of an SCCIC records search, NAHC SLF search, additional archival research, targeted field survey, and AB 52 consultation efforts, did not identify any TCRs within the RSA. No TCRs were identified in the RSA for any of the alignments and stations, the design option, or the MSF site.

3.17.6 PROJECT MEASURES

Project measures are design features, best management practices, or other commitments that Metro would implement as part of all proposed alignments and stations, the design option, and the MSF to reduce or avoid environmental effects associated with project construction and operation. Project measures are not the same as mitigation measures, which are used to reduce an environmental impact's significance level. Where applicable, project measures are also discussed in Section 3.17.7 as part of the evaluation of environmental impacts. There are no project measures specific to TCRs that have been identified.

3.17.7 IMPACT EVALUATION AND MITIGATION MEASURES

This analysis presents the construction and operational impacts for TCRs, as well as any applicable mitigation measures associated with KNE. A summary of the impact conclusions and applicable mitigation measures is found in Table 3.17-1 in Section 3.17.7.4.

3.17.7.1 IMPACT TCR-1: TRIBAL CULTURAL RESOURCES LISTED OR ELIGIBLE FOR LISTING

Impact TCR-1: Would the project cause a substantial adverse change in the significance of a TCR listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC Section 5020.1(k)?

3.17.7.1.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.17.7.1.1.1 CONSTRUCTION IMPACTS

Significant Impact. No TCRs listed or eligible for listing in the CRHR or in a local register of historical resources have been identified within the KNE San Vicente–Fairfax Alignment RSA; however, Gabrieliño villages, burials, and important prehistoric resource areas were identified nearby. Additionally, the region contains Native American cultural resources, Traditional Cultural Properties, and/or TCRs. Therefore, it is possible that unknown TCRs may be buried within the RSA, and it is possible these resources could be unearthed during project excavation activities. The proposed alignment is largely within the public right-of-way that has already been disturbed with utility and street construction, but these disturbances were relatively shallow. Shallow construction work, such as for the at-grade portions of station portals and staging areas, have limited potential to encounter intact TCRs due to prior disturbance, but other proposed construction activities, such as mass

excavation required for the new stations and tunnel construction, have the potential to encounter deeper, intact archaeological deposits. Based upon the likelihood of encountering intact archaeological deposits during certain construction activities, the alignment has the potential to cause a substantial adverse change in the significance of a TCR listed or eligible for listing in the CRHR or in a local register of historical resources. Therefore, the KNE San Vicente–Fairfax Alignment would have a potentially significant impact during construction, and mitigation would be required.

3.17.7.1.1.2 OPERATIONAL IMPACTS

No Impact. Operational activities associated with the KNE San Vicente–Fairfax Alignment would be limited to the operation and maintenance of the project. These activities would not include further ground-disturbing activities and would not cause a substantial adverse change in the significance of a TCR. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during operation.

3.17.7.1.2 KNE FAIRFAX ALIGNMENT

3.17.7.1.2.1 CONSTRUCTION IMPACTS

Significant Impact. No TCRs listed or eligible for listing in the CRHR or in a local register of historical resources have been identified within the KNE Fairfax Alignment RSA; however, Gabrieliño villages, burials, and important prehistoric resource areas were identified nearby. Additionally, the region contains Native American cultural resources, Traditional Cultural Properties, and/or TCRs. Therefore, it is possible that unknown TCRs may be buried within the RSA, and it is possible these resources could be unearthed during project excavation activities. The proposed alignment is largely within the public right-of-way that has already been disturbed with utility and street construction, but these disturbances were relatively shallow. Shallow construction work, such as for the at-grade portions of station portals and staging areas, have limited potential to encounter intact TCRs due to prior disturbance, but other proposed construction activities, such as mass excavation required for the new stations and tunnel construction, have the potential to encounter deeper, intact archaeological deposits. Based upon the likelihood of encountering intact archaeological deposits during certain construction activities, the alignment has the potential to cause a substantial adverse change in the significance of a TCR listed or eligible for listing in the CRHR or in a local register of historical resources. Therefore, the KNE Fairfax Alignment would have a potentially significant impact during construction, and mitigation would be required.

3.17.7.1.2.2 OPERATIONAL IMPACTS

No Impact. Operational activities associated with the KNE Fairfax Alignment would be limited to the operation and maintenance of the project. These activities would not include further ground-disturbing activities and would not cause a substantial adverse change in the significance of a TCR. Therefore, the KNE Fairfax Alignment would have no impact during operation.

3.17.7.1.3 KNE LA BREA ALIGNMENT

3.17.7.1.3.1 CONSTRUCTION IMPACTS

Significant Impact. No TCRs listed or eligible for listing in the CRHR or in a local register of historical resources have been identified within the KNE La Brea Alignment RSA; however, Gabrieliño villages, burials, and important prehistoric resource areas were identified nearby. Additionally, the region contains Native American cultural resources, Traditional Cultural Properties, and/or TCRs. Therefore, it is possible that unknown TCRs may be buried within the RSA, and it is possible these resources could be unearthed during project excavation activities. The proposed alignment is largely within the public right-of-way that has already been disturbed with utility and street construction, but these disturbances were relatively shallow. Shallow construction work, such as for the at-grade portions of station portals and staging areas, have limited potential to encounter intact TCRs due to prior disturbance, but other proposed construction activities, such as mass excavation required for the new stations and tunnel construction, have the potential to encounter deeper, intact archaeological deposits. Based upon the likelihood of encountering intact archaeological deposits during certain construction activities, the alignment has the potential to cause a substantial adverse change in the significance of a TCR listed or eligible for listing in the CRHR or in a local register of historical resources. Therefore, the KNE La Brea Alignment would have a potentially significant impact during construction, and mitigation would be required.

3.17.7.1.3.2 OPERATIONAL IMPACTS

No Impact. Operational activities associated with the KNE La Brea Alignment would be limited to the operation and maintenance of the project. These activities would not include further ground-disturbing activities and would not cause a substantial adverse change in the significance of a TCR. Therefore, the KNE La Brea Alignment would have no impact during operation.

3.17.7.1.4 HOLLYWOOD BOWL DESIGN OPTION

3.17.7.1.4.1 CONSTRUCTION IMPACTS

Significant Impact. No TCRs listed or eligible for listing in the CRHR or in a local register of historical resources have been identified within the Hollywood Bowl Design Option RSA; however, Gabrieliño villages, burials, and important prehistoric resource areas were identified nearby. Additionally, the region contains Native American cultural resources, Traditional Cultural Properties, and/or TCRs. Therefore, it is possible that unknown TCRs may be buried within the RSA, and it is possible these resources could be unearthed during project excavation activities. The proposed design option is largely within the public right-of-way that has already been disturbed with utility and street construction, but these disturbances were relatively shallow. Shallow construction work, such as for the at-grade portions of the station portal and staging area, have limited potential to encounter intact TCRs due to prior disturbance, but other proposed construction activities, such as mass excavation required for the new station and tunnel construction, have the potential to encounter deeper, intact archaeological deposits. Based upon the likelihood of encountering intact archaeological deposits during certain construction activities, the design option has the potential to cause a substantial adverse change in the significance of a TCR listed or eligible for listing in the CRHR or in a local register of historical resources.

Therefore, the Hollywood Bowl Design Option would have a potentially significant impact during construction, and mitigation would be required.

3.17.7.1.4.2 OPERATIONAL IMPACTS

No Impact. Operational activities associated with the Hollywood Bowl Design Option would be limited to the operation and maintenance of the project. These activities would not include further ground-disturbing activities and would not cause a substantial adverse change in the significance of a TCR. Therefore, the Hollywood Bowl Design Option would have no impact during operation.

3.17.7.1.5 MAINTENANCE AND STORAGE FACILITY

3.17.7.1.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Buried TCRs may exist within the MSF RSA, and it is possible these resources could be unearthed during excavation activities; however, it is anticipated that these activities would be minimal and/or relatively shallow. Because the MSF RSA is almost entirely developed, the minimal and/or shallow construction work that would be required during construction would be unlikely to encounter intact TCRs. Therefore, the MSF would have a less than significant impact during construction.

3.17.7.1.5.2 OPERATIONAL IMPACTS

No Impact. Operational activities associated with the MSF would be limited to the operation and maintenance of the project. These activities would not include further ground-disturbing activities and would not cause a substantial adverse change in the significance of a TCR. Therefore, the MSF would have no impact during operation.

3.17.7.2 IMPACT TCR-2: RESOURCES DETERMINED SIGNIFICANT BY THE LEAD AGENCY

Impact TCR-2: Would the project cause a substantial adverse change in the significance of a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1?

3.17.7.2.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.17.7.2.1.1 CONSTRUCTION IMPACTS

Significant Impact. To date, the lead agency has not determined that a resource within the KNE San Vicente–Fairfax Alignment RSA is significant; however, Gabrieliño villages, burials, and important prehistoric resource areas have been identified nearby. Additionally, the region contains Native American cultural resources, Traditional Cultural Properties, and/or TCRs. Therefore, it is possible that unknown TCRs may be buried within the RSA, and these resources could be unearthed during project excavation activities. Although portions of the alignment are within previously disturbed soils with limited potential to contain intact resources, tribal representatives from the Gabrieleño Band of Mission Indians – Kizh Nation have indicated that resources found within disturbed contexts are important to the Tribe. As such, all proposed construction activities,

including mass excavations required for new stations and tunnel construction, as well as shallow construction work for at-grade portions of the station portals and staging areas, have the potential to encounter significant TCRs. Based upon the likelihood of encountering significant TCRs during construction activities, the alignment has the potential to cause a substantial adverse change in the significance of a resource determined significant by the lead agency. Therefore, the KNE San Vicente–Fairfax Alignment would have a potentially significant impact during construction, and mitigation would be required.

3.17.7.2.1.2 OPERATIONAL IMPACTS

No Impact. Operational activities associated with the KNE San Vicente–Fairfax Alignment would be limited to the operation and maintenance of the project. These activities would not include further ground-disturbing activities and would not cause a substantial adverse change in the significance of a TCR. Therefore, the KNE San Vicente–Fairfax Alignment would have no impact during operation.

3.17.7.2.2 KNE FAIRFAX ALIGNMENT

3.17.7.2.2.1 CONSTRUCTION IMPACTS

Significant Impact. To date, the lead agency has not determined that a resource within the KNE Fairfax Alignment RSA is significant; however, Gabrieliño villages, burials, and important prehistoric resource areas have been identified nearby. Additionally, the region contains Native American cultural resources, Traditional Cultural Properties, and/or TCRs. Therefore, it is possible that unknown TCRs may be buried within the RSA, and these resources could be unearthed during project excavation activities. Although portions of the alignment are within previously disturbed soils with limited potential to contain intact resources, tribal representatives from the Gabrieleño Band of Mission Indians – Kizh Nation have indicated that resources found within disturbed contexts are important to the Tribe. As such, all proposed construction activities, including mass excavations required for new stations and tunnel construction, as well as shallow construction work for at-grade portions of the station portals and staging areas, have the potential to encounter significant TCRs. Based upon the likelihood of encountering significant TCRs during construction activities, the alignment has the potential to cause a substantial adverse change in the significance of a resource determined significant by the lead agency. Therefore, the KNE Fairfax Alignment would have a potentially significant impact during construction, and mitigation would be required.

3.17.7.2.2.2 OPERATIONAL IMPACTS

No Impact. Operational activities associated with the KNE Fairfax Alignment would be limited to the operation and maintenance of the project. These activities would not include further ground-disturbing activities and would not cause a substantial adverse change in the significance of a TCR. Therefore, the KNE Fairfax Alignment would have no impact during operation.

3.17.7.2.3 KNE LA BREA ALIGNMENT

3.17.7.2.3.1 CONSTRUCTION IMPACTS

Significant Impact. To date, the lead agency has not determined that a resource within the KNE La Brea Alignment RSA is significant; however, Gabrieliño villages, burials, and important prehistoric resource areas have been identified nearby. Additionally, the region contains Native American cultural resources, Traditional Cultural Properties, and/or TCRs. Therefore, it is possible that unknown TCRs may be buried within the RSA, and these resources could be unearthed during project excavation activities. Although portions of the alignment are within previously disturbed soils with limited potential to contain intact resources, tribal representatives from the Gabrieleño Band of Mission Indians – Kizh Nation have indicated that resources found within disturbed contexts are important to the Tribe. As such, all proposed construction activities, including mass excavations required for new stations and tunnel construction, as well as shallow construction work for at-grade portions of the station portals and staging areas, have the potential to encounter significant TCRs. Based upon the likelihood of encountering significant TCRs during construction activities, the alignment has the potential to cause a substantial adverse change in the significance of a resource determined significant by the lead agency. Therefore, the KNE La Brea Alignment would have a potentially significant impact during construction, and mitigation would be required.

3.17.7.2.3.2 OPERATIONAL IMPACTS

No Impact. Operational activities associated with the KNE La Brea Alignment would be limited to the operation and maintenance of the project. These activities would not include further ground-disturbing activities and would not cause a substantial adverse change in the significance of a TCR. Therefore, the KNE La Brea Alignment would have no impact during operation.

3.17.7.2.4 HOLLYWOOD BOWL DESIGN OPTION

3.17.7.2.4.1 CONSTRUCTION IMPACTS

Significant Impact. To date, the lead agency has not determined that a resource within the Hollywood Bowl Design Option RSA is significant; however, Gabrieliño villages, burials, and important prehistoric resource areas have been identified nearby. Additionally, the region contains Native American cultural resources, Traditional Cultural Properties, and/or TCRs. Therefore, it is possible that unknown TCRs may be buried within the RSA, and these resources could be unearthed during project excavation activities. Although portions of the design option are within previously disturbed soils with limited potential to contain intact resources, tribal representatives from the Gabrieleño Band of Mission Indians – Kizh Nation have indicated that resources found within disturbed contexts are important to the Tribe. As such, all proposed construction activities, including mass excavations required for station and tunnel construction, as well as shallow construction work for at-grade portions of the station portal and staging area, have the potential to encounter significant TCRs. Based upon the likelihood of encountering significant TCRs during construction activities, the design option has the potential to cause a substantial adverse change in the significance of a resource determined significant by the lead agency. Therefore, the Hollywood Bowl Design Option would have a potentially significant impact during construction, and mitigation would be required.

3.17.7.2.4.2 OPERATIONAL IMPACTS

No Impact. Operational activities associated with the Hollywood Bowl Design Option would be limited to the operation and maintenance of the project. These activities would not include further ground-disturbing activities and would not cause a substantial adverse change in the significance of a TCR. Therefore, the Hollywood Bowl Design Option would have no impact during operation.

3.17.7.2.5 MAINTENANCE AND STORAGE FACILITY

3.17.7.2.5.1 CONSTRUCTION IMPACTS

Significant Impact. To date, the lead agency has not determined that a resource within the MSF RSA is significant; however, Gabrieliño villages, burials, and important prehistoric resource areas have been identified nearby. Additionally, the region contains Native American cultural resources, Traditional Cultural Properties, and/or TCRs. Therefore, it is possible that unknown TCRs may be buried within the RSA, and these resources could be unearthed during project excavation activities. Because the MSF RSA is almost entirely developed, the minimal and/or shallow construction work that would be required during construction would be unlikely to encounter intact TCRs. However, tribal representatives from the Gabrieleño Band of Mission Indians – Kizh Nation have indicated that resources found within disturbed contexts are important to the Tribe. As such, all proposed construction activities have the potential to encounter significant TCRs. Based upon the likelihood of encountering significant TCRs during construction activities, the MSF has the potential to cause a substantial adverse change in the significance of a resource determined significant by the lead agency. Therefore, the MSF would have a potentially significant impact during construction, and mitigation would be required.

3.17.7.2.5.2 OPERATIONAL IMPACTS

No Impact. Operational activities associated with the MSF would be limited to the operation and maintenance of the project. These activities would not include further ground-disturbing activities and would not cause a substantial adverse change in the significance of a TCR. Therefore, the MSF would have no impact during operation.

3.17.7.3 MITIGATION MEASURES

The mitigation measures described below are provided to reduce significant TCR impacts. Section 3.17.7.3.3 discusses the impact significance after mitigation.

3.17.7.3.1 MM TCR-1: CULTURAL RESOURCES IDENTIFICATION TRAINING

Prior to any ground-disturbing activities, all construction personnel shall be provided with appropriate tribal and cultural resources training. The training shall instruct the personnel regarding the legal framework protecting cultural resources and TCRs, typical kinds of cultural resources and TCRs that may be found during construction, and proper procedures and notifications if cultural resources and/or TCRs are discovered. The training shall be prepared by a Secretary of the Interior professionally qualified archaeologist, in consultation with interested Native American tribes consulting under AB 52, and include types of cultural and tribal cultural resources and artifacts that would be considered potentially significant during construction.

3.17.7.3.2 MM TCR-2: NATIVE AMERICAN MONITORING AND CONSULTATION

Project-related ground-disturbing activities shall be monitored by a Native American representative from an NAHC identified tribe. The tribal monitor shall be ancestrally affiliated with the project vicinity and qualified by their tribe to monitor for TCRs.

In the event that an archaeological resource is discovered during project construction, all work shall be halted within 50 feet of the find until the find has been assessed by the tribal monitor and a Secretary of the Interior professionally qualified archaeologist. If the find is determined to be of Native American origin, regardless of any significance evaluation determined by Metro based on the initial assessment of the find by the qualified archaeologist, the Native American tribes that consulted on the proposed project pursuant to AB 52 shall be notified and be provided information about the find to allow for early input from the tribal representatives with regard to the potential significance and treatment of the resource. Resources shall be treated with culturally appropriate dignity, taking into consideration the tribal cultural values and meaning of the resource. The input of all consulting tribes shall be considered in the preparation of any required treatment plan activities prepared by the qualified archaeologist for any prehistoric archaeological resources or tribal cultural resources identified during the project. Work in the area of the discovery may not resume until evaluation and treatment of the resource is completed and/or the resource is recovered and removed from the site. Construction activities may continue on other parts of the construction site while evaluation and treatment of the resource occurs.

3.17.7.3.3 IMPACT SIGNIFICANCE AFTER MITIGATION

As described in Section 3.17.7.1, there would be significant impacts related to a substantial adverse change in the significance of a TCR listed or eligible for listing in the CRHR, or in a local register of historical resources (Impact TCR-1) during construction of the KNE San Vicente–Fairfax Alignment, KNE Fairfax Alignment, KNE La Brea Alignment, and the Hollywood Bowl Design Option. In addition, as described in Section 3.17.7.2, there would be significant impacts related to a substantial adverse change in the significance of a resource determined to be significant by the lead agency (Impact TCR-2) during construction of each of the alignments, the Hollywood Bowl Design Option, and the MSF. The subsections below describe the impact significance for each of the alignments, the design option, and the MSF, as applicable, after implementation of mitigation.

3.17.7.3.3.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

IMPACT TCR-1: TRIBAL CULTURAL RESOURCES LISTED OR ELIGIBLE FOR LISTING

Implementation of mitigation measures MM TCR-1 (Cultural Resources Identification Training) and MM TCR-2 (Native American Monitoring and Consultation) during construction of the KNE San Vicente–Fairfax Alignment would reduce impacts to unknown TCRs eligible for listing in the CRHR or a local register of historical resources to a less than significant level.

IMPACT TCR-2: RESOURCES DETERMINED SIGNIFICANT BY THE LEAD AGENCY

Implementation of mitigation measures MM TCR-1 (Cultural Resources Identification Training) and MM TCR-2 (Native American Monitoring and Consultation) during construction of the KNE San Vicente–Fairfax Alignment would reduce impacts to unknown resources determined significant by the lead agency to a less than significant level.

3.17.7.3.3.2 KNE FAIRFAX ALIGNMENT

IMPACT TCR-1: TRIBAL CULTURAL RESOURCES LISTED OR ELIGIBLE FOR LISTING

Implementation of mitigation measures MM TCR-1 (Cultural Resources Identification Training) and MM TCR-2 (Native American Monitoring and Consultation) during construction of the KNE Fairfax Alignment would reduce impacts to unknown TCRs eligible for listing in the CRHR or a local register of historical resources to a less than significant level.

IMPACT TCR-2: RESOURCES DETERMINED SIGNIFICANT BY THE LEAD AGENCY

Implementation of mitigation measures MM TCR-1 (Cultural Resources Identification Training) and MM TCR-2 (Native American Monitoring and Consultation) during construction of the KNE Fairfax Alignment would reduce impacts to unknown resources determined significant by the lead agency to a less than significant level.

3.17.7.3.3.3 KNE LA BREA ALIGNMENT

IMPACT TCR-1: TRIBAL CULTURAL RESOURCES LISTED OR ELIGIBLE FOR LISTING

Implementation of mitigation measures MM TCR-1 (Cultural Resources Identification Training) and MM TCR-2 (Native American Monitoring and Consultation) during construction of the KNE La Brea Alignment would reduce impacts to unknown TCRs eligible for listing in the CRHR or a local register of historical resources to a less than significant level.

IMPACT TCR-2: RESOURCES DETERMINED SIGNIFICANT BY THE LEAD AGENCY

Implementation of mitigation measures MM TCR-1 (Cultural Resources Identification Training) and MM TCR-2 (Native American Monitoring and Consultation) during construction of the KNE La Brea Alignment would reduce impacts to unknown resources determined significant by the lead agency to a less than significant level.

3.17.7.3.3.4 HOLLYWOOD BOWL DESIGN OPTION

IMPACT TCR-1: TRIBAL CULTURAL RESOURCES LISTED OR ELIGIBLE FOR LISTING

Implementation of mitigation measures MM TCR-1 (Cultural Resources Identification Training) and MM TCR-2 (Native American Monitoring and Consultation) during construction of the Hollywood Bowl

Design Option would reduce impacts to unknown TCRs eligible for listing in the CRHR or a local register of historical resources to a less than significant level.

IMPACT TCR-2: RESOURCES DETERMINED SIGNIFICANT BY THE LEAD AGENCY

Implementation of mitigation measures MM TCR-1 (Cultural Resources Identification Training) and MM TCR-2 (Native American Monitoring and Consultation) during construction of the KNE Hollywood Bowl Design Option would reduce impacts to unknown resources determined significant by the lead agency to a less than significant level.

3.17.7.3.3.5 MAINTENANCE AND STORAGE FACILITY

IMPACT TCR-2: RESOURCES DETERMINED SIGNIFICANT BY THE LEAD AGENCY

Implementation of mitigation measures MM TCR-1 (Cultural Resources Identification Training) and MM TCR-2 (Native American Monitoring and Consultation) during construction of the MSF would reduce impacts to unknown resources determined significant by the lead agency to a less than significant level.

3.17.7.4 SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

Table 3.17-1 summarizes the TCR impact significance conclusions and applicable mitigation measures.

TABLE 3.17-1. KNE SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

IMPACT		IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES				
		KNE SAN VICENTE–FAIRFAX ALIGNMENT	KNE FAIRFAX ALIGNMENT	KNE LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MAINTENANCE AND STORAGE FACILITY
Impact TCR-1: Tribal Cultural Resources Listed or Eligible for Listing	Impact Before Mitigation	Construction: Significant Operation: No Impact	Construction: Significant Operation: No Impact	Construction: Significant Operation: No Impact	Construction: Significant Operation: No Impact	Construction: LTS Operation: No Impact
	Mitigation Measures	Construction: MM TCR-1; MM TCR-2 Operation: None Required	Construction: MM TCR-1; MM TCR-2 Operation: None Required	Construction: MM TCR-1; MM TCR-2 Operation: None Required	Construction: MM TCR-1; MM TCR-2 Operation: None Required	Construction: None Required Operation: None Required
	Impact After Mitigation	Construction: LTS Operation: No Impact	Construction: LTS Operation: No Impact	Construction: LTS Operation: No Impact	Construction: LTS Operation: No Impact	Construction: LTS Operation: No Impact
Impact TCR-2: Resources Determined Significant by the Lead Agency	Impact Before Mitigation	Construction: Significant Operation: No Impact	Construction: Significant Operation: No Impact	Construction: Significant Operation: No Impact	Construction: Significant Operation: No Impact	Construction: Significant Operation: No Impact
	Mitigation Measures	Construction: MM TCR-1; MM TCR-2 Operation: None Required	Construction: MM TCR-1; MM TCR-2 Operation: None Required	Construction: MM TCR-1; MM TCR-2 Operation: None Required	Construction: MM TCR-1; MM TCR-2 Operation: None Required	Construction: MM TCR-1; MM TCR-2 Operation: None Required
	Impact After Mitigation	Construction: LTS Operation: No Impact	Construction: LTS Operation: No Impact	Construction: LTS Operation: No Impact	Construction: LTS Operation: No Impact	Construction: LTS Operation: No Impact

Source: Connect Los Angeles Partners 2024
LTS = less than significant impact

3.18 UTILITIES AND SERVICE SYSTEMS

3.18.1 INTRODUCTION

This discussion provides an evaluation of K Line Northern Extension (KNE) as it relates to utility and service systems. It includes descriptions of the federal, state, and local regulatory setting, existing conditions, and the impacts from construction and operation of the proposed alignments and stations, design option, and the maintenance and storage facility (MSF), as well as mitigation measures where applicable. For more detailed information, refer to the KNE Utilities and Service Systems Technical Report (Appendix 3.18-A).

3.18.2 REGULATORY FRAMEWORK

3.18.2.1 FEDERAL

The following federal laws and regulations are relevant to construction and operation of the project:

- Federal Power Act of 1935
- Resource Conservation and Recovery Act (42 United States Code Section 6901 et seq.)
- Title 40 of the Code of Federal Regulations (CFR) Section 256.42
- The Communications Act of 1934 (CFR Title 47)
- Clean Water Act Sections 301, Section 303, Section 401, Section 402, Section 404
- Safe Drinking Water Act

3.18.2.2 STATE

The following state laws and regulations are relevant to construction and operation of the project:

- Assembly Bill 341 – CalRecycle
- Assembly Bill 939 – Integrated Waste Management Act
- Senate Bill 1374 – Construction and Demolition Waste Materials Diversion Requirements
- Section 5.408.1.1 through 5.408.1.3 of the 2022 California Green Building Standards Code (CALGreen)
- Construction General National Pollutant Discharge Elimination System (NPDES) Permit Order No. 2009-0009-DWQ
- Porter-Cologne Water Quality Act
- Industrial General NPDES Permit Order 2014-0057-DWQ
- Metropolitan Water District (MWD) Act of 1928
- California Water Code Sections 10910 through 10915, Sections 10610 through 10656, and Title 22

- State Water Resources Control Board, Division of Drinking Water, Source Water Assessment Program
- California Public Utilities Commission General Orders
- California Code of Regulations Public – Utilities and Energy (Title 20), Utilities Code – Division 1, California Plumbing Code (Title 24 Part 5)
- California Government Code Section 4216 – Protection of Underground Infrastructure – Underground Service Alert

3.18.2.3 REGIONAL

No regional regulations are applicable to the project regarding utilities and service systems.

3.18.2.4 LOCAL

The following local policies and regulations are applicable to utilities and service systems:

- California Urban Water Management Planning Act
- Los Angeles Regional Water Quality Control Board (LARWQCB) Order No. R4-2012-0175 – Los Angeles County Municipal Separate Storm Sewer System (MS4) Permit
- LARWQCB Order No. R4-2013-0095 (NPDES No. CAG994004) - Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties
- LARWQCB Order No. 93-010 - Waste Discharge Requirements for Specified Discharges to Groundwater in the Santa Clara River and Los Angeles River Basins
- LARWQCB Order No. 91-93 - Waste Discharge Requirements for Discharge of Non-Hazardous Contaminated Soils and Other Wastes in Los Angeles River and Santa Clara River Basins
- Watershed Management Programs (WMPs)
- Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties
- Enhanced Watershed Management Programs
- Metro's 2020 Moving Beyond Sustainability Strategic Plan (Metro 2020)
- Metro's Water Use and Conservation Policy (Metro 2009)
- Metro's Water Action Plan (Metro 2010)
- Metro Rail Design Criteria (MRDC)

Los Angeles County and the Cities of Los Angeles and West Hollywood have codes, ordinances, and general plans that regulate permitting, construction, and operational activities as they pertain to utilities and service systems. These ordinances and policies pertain to water supply and conservation, wastewater infrastructure, stormwater management, recycling, solid waste, and construction and demolition waste recycling requirements.

3.18.3 METHODOLOGY

3.18.3.1 CEQA METHODOLOGY

The purpose of this analysis is to evaluate the project against California Environmental Quality Act (CEQA) thresholds of significance as the basis for determining the level of impacts related to utilities and service systems.

3.18.3.2 SIGNIFICANCE THRESHOLDS

In accordance with Appendix G of the 2022 CEQA Guidelines, the project would have a significant impact related to utilities and service systems if it would:

- Impact UTL-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
- Impact UTL-2: Result in insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.
- Impact UTL-3: Result in a determination by the wastewater treatment provider, which serves or may serve the project, that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
- Impact UTL-4: Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.
- Impact UTL-5: Result in noncompliance with federal, state, and local management and reduction statutes and regulations related to solid waste.

3.18.4 RESOURCE STUDY AREA

The utilities and service systems resource study area (RSA) is defined as the subsurface and surface area within a 0.5-mile radius around the alignments and stations, the design option, and the MSF, where utilities exist. In assessing demand, utilities are also evaluated within their respective service areas, which vary among utility type and service provider and are regional. Service areas are described below as they relate to the RSAs for the alignments and stations, the design option, and the MSF.

3.18.5 EXISTING SETTING

This existing setting discussion summarizes current conditions related to utilities and service systems within and near the KNE RSA.

3.18.5.1 REGIONAL SETTING

3.18.5.1.1 WATER SUPPLY

The Metropolitan Water District of Southern California (MWD) is the principal distributor of imported water in Southern California, providing water to 26 public water agencies across this region, including agencies located in the RSA (MWD 2021). Member agencies purchase all or a portion of their water from MWD. Los Angeles Department of Water and Power (LADWP) and the City of Beverly Hills are member agencies that receive supplies from MWD and subsequently supply that water to other local supply agencies in the RSA. Local water supply is described in further detail for each urban water supplier.

3.18.5.1.1.1 METROPOLITAN WATER DISTRICT

MWD's service area covers the Southern California coastal plain. MWD currently serves the RSAs related to the alignments. It extends about 200 miles along the Pacific Ocean from the City of Oxnard on the north to the international border with Mexico on the south, and it reaches as far as 70 miles inland from the coast. The total area served is approximately 5,200 square miles, and it includes portions of Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura Counties. Although only 14 percent of the land area of the six Southern California counties is within MWD's service area, approximately 86 percent of the populations of those counties reside within MWD's boundaries.

MWD receives water from the Colorado River through the Colorado River Aqueduct and from the State Water Project through the California Aqueduct. Table 3.18-1 provides existing and project MWD water demand.

TABLE 3.18-1. MWD REGIONAL WATER DEMAND AND POPULATION

	2020 (EXISTING)	2025 (PROJECTED)	2030 (PROJECTED)	2035 (PROJECTED)	2040 (PROJECTED)	2045 (PROJECTED)
Total Population and Population Growth (MWD Service Area)	19,035,000	20,089,000	20,634,000	21,145,000	21,610,000	22,026,000
Total Water Use (Single Dry-Year) (Acre-Feet)	5,219,000	4,929,000	5,037,000	5,160,000	5,265,000	5,378,000
Total Water Use (Drought Lasting Five Consecutive Water Years) (Acre-Feet)	5,219,000	4,877,000	5,064,000	5,182,000	5,299,000	5,410,000
Total Water Use (Normal Water Year) (Acre-Feet)	5,219,000	4,925,000	5,032,000	5,156,000	5,261,000	5,374,000

Source: MWD 2021
MWD = Metropolitan Water District of Southern California

3.18.5.1.1.2 LOS ANGELES DEPARTMENT OF WATER AND POWER

The LADWP is the nation's second largest public water utility, providing services to over 687,000 customers. LADWP's system has 323,820 acre-feet (AF) of storage capacity and operates and maintains 7,340 miles of water pipeline. LADWP is the water supplier for the City of Los Angeles, and it currently serves the RSAs for all alignments and stations, the design option, and the MSF.

Primary sources of water for the LADWP service area are the Los Angeles Aqueduct, local groundwater, State Water Project (supplied by MWD), and the Colorado River Aqueduct (supplied by MWD). Many of LADWP's traditional water supply sources are becoming increasingly constrained due to hydrologic variability, environmental regulations, and groundwater basin contamination. To lessen these constraints on water supply resources, LADWP is investing in sustainable sources such as conservation, water use efficiency, water recycling, stormwater capture, and local groundwater development and remediation, while protecting its imported water supply. Over the last 20 years, demand has undergone a 29 percent reduction to a near record low of 487,591 AF between 2019 and 2020; the average annual water supply between the years 2016 and 2020 was 497,386 AF (Table 3.18-2).

TABLE 3.18-2. LADWP WATER SERVICE AREA DEMANDS AND POPULATION

	2020 (EXISTING)	2025 (PROJECTED)	2030 (PROJECTED)	2035 (PROJECTED)	2040 (PROJECTED)	2045 (PROJECTED)
Total Population (LADWP Service Area)	4,041,284	4,243,478	4,374,240	4,520,870	4,670,693	4,806,396
Total Water Use (Acre-Feet)	487,591	509,501	526,658	536,148	554,486	565,751

Source: LADWP 2021
LADWP = Los Angeles Department of Water and Power

3.18.5.1.1.3 CITY OF BEVERLY HILLS

The City of Beverly Hills currently serves the western side of the City of West Hollywood, and the RSA for the proposed San Vicente/Santa Monica Station that would be associated with the KNE San Vicente–Fairfax Alignment. The service area is north of Beverly Boulevard, south of Sunset Boulevard, west of Huntley Drive, and east of North Doheny Drive. LADWP serves the portions of the City of West Hollywood generally east of Huntley Drive.

The City of Beverly Hills's water service area is approximately 6.35 square miles and consists of the City of Beverly Hills and a portion of the City of West Hollywood, which is about 10 percent of the city's total water service area. Based on data from the Southern California Association of Governments (SCAG) and the California Department of Finance, the City of Beverly Hills's water service area population was 43,371 in 2020 (Table 3.18-3) (City of Beverly Hills 2021). The City of Beverly Hills obtains its water supply from two sources: imported surface water purchased from MWD and local groundwater extracted from the local Hollywood Basin.

TABLE 3.18-3. CITY OF BEVERLY HILLS WATER SERVICE AREA DEMANDS AND POPULATION

	2020 (EXISTING)	2025 (PROJECTED)	2030 (PROJECTED)	2035 (PROJECTED)	2040 (PROJECTED)	2045 (PROJECTED)
Total Population (City of Beverly Hills Water Service Area)	43,371	44,176	44,618	45,214	45,712	46,279
Total Water Use (Acre-Feet)	9,565	10,053	10,523	10,993	11,463	11,933

Source: City Beverly Hills 2021

3.18.5.1.1.4 CITY OF INGLEWOOD

City of Inglewood infrastructure exists within the eastern side of the KNE MSF RSA but does not provide water services to the site.

3.18.5.1.2 SANITARY SEWER

3.18.5.1.2.1 CITY OF LOS ANGELES BUREAU OF SANITATION

The three collection systems owned and operated by the City of Los Angeles convey wastewater via approximately 6,439 miles of gravity mains, 33 miles of force mains, and 46 pumping plants. Currently, an average wastewater flow rate of approximately 272 million gallons per day (MGD) is generated in the system. The three collection systems also convey the flows of 29 satellite sanitary districts to plants for treatment. The City of Los Angeles currently serves the RSAs related to all alignments and the design option.

KNE would be served by Hyperion Treatment Plant, also detailed in the City of West Hollywood discussion below. The Hyperion Collection System has approximately 6,043 miles of gravity mains, 12 miles of force mains, and an average wastewater flow rate of 260 MGD. The Hyperion Treatment Plant has a dry weather average design treatment capacity of 450 MGD and a wet weather peak hydraulic capacity of approximately 850 MGD.

3.18.5.1.2.2 LOS ANGELES COUNTY SANITATION DISTRICTS

The Sanitation Districts of Los Angeles County (LACSD), which comprise 24 independent districts, provide wastewater treatment services to approximately 5.6 million residents in 78 cities and unincorporated areas in Los Angeles County. The City of West Hollywood is served by District 4.

3.18.5.1.2.3 CITY OF WEST HOLLYWOOD

The City of West Hollywood owns a sanitary sewer system comprised of approximately 39.37 miles of gravity flow sewer collection lines (City of West Hollywood 2019). The collection system is comprised of clay, gravity flow, eight-inch to 18-inch diameter collection lines, and approximately 885 precast concrete and brick manholes. The City of West Hollywood's sanitary sewer and stormwater conveyance systems are separate. The City of West Hollywood is a part of LACSD District 4. Its collection system conveys wastewater into the Hyperion Collection System and Hyperion Treatment Plant that is owned and operated by the City

of Los Angeles. Capacity and average daily flow of the Hyperion Collection System are described above in the City of Los Angeles District of Sanitation discussion. The City of West Hollywood sewer collection lines currently serve the KNE San Vicente–Fairfax and Fairfax Alignments RSAs.

3.18.5.1.2.4 CITY OF INGLEWOOD

Although City of Inglewood infrastructure exists within the eastern side of the KNE MSF RSA, it would not provide sanitary sewer services to the site. The City of Inglewood has a collection sewer system comprised of 145 miles of gravity sewer pipes ranging from four inches to 15 inches in diameter (City of Inglewood 2015).

3.18.5.1.3 SOLID WASTE

3.18.5.1.3.1 CITY OF LOS ANGELES

Solid waste generated in the City of Los Angeles is hauled to materials recovery/transfer stations in the Los Angeles area and is managed by City of Los Angeles Bureau of Sanitation (LASAN). Those transfer stations have numerous landfills where the solid waste produced is deposited. Once a landfill reaches its maximum accepted tonnage for the day, haulers are sent to another landfill to deposit solid waste. Most of the solid waste generated in the City of Los Angeles is disposed of at the Calabasas and Chiquita Canyon Landfills. LASAN currently serves the RSAs related to all KNE alignments and stations, the design option, and the MSF. Table 3.18-4 lists active and regulatory permitted solid waste facilities that serve the City of Los Angeles, with their permitted capacity and anticipated closure dates.

TABLE 3.18-4. CITY OF LOS ANGELES SOLID WASTE DISPOSAL LANDFILL CAPACITY

LANDFILL SITE NAME	LOCATION	MAX. PERMIT CAPACITY (Cubic Yards)	REMAINING CAPACITY (Cubic Yards)	MAX. THROUGHPUT (Tons/Day)	REMAINING CAPACITY DATE	CLOSURE
Antelope Valley Public	Palmdale	30,200,000	17,911,225	5,548	10/31/2017	4/1/2044
Avenal Regional Landfill	Avenal	36,300,000	28,900,000	6,000	8/31/2020	3/31/2056
Azusa Land Reclamation Co. Landfill	Azusa	216,000	N/A	8,000	N/A	7/11/2018
Bakersfield Metropolitan (Bena) Secured Landfill Facility	Bakersfield	53,000,000	32,808,260	4,500	7/1/2013	4/1/2046
Burbank Landfill Site	Burbank	5,933,365	5,174,362	240	1/1/2010	1/1/2053
El Sobrante Landfill	Corona	209,910,000	143,977,170	16,054	4/1/018	1/1/2051
Calabasas Landfill	Agoura	69,300,000	14,500,000	3,500	12/31/2014	1/1/2029
Chiquita Canyon Sanitary	Castaic	110,366,00	60,408,000	12,000	8/24/2018	1/1/2047

LANDFILL SITE NAME	LOCATION	MAX. PERMIT CAPACITY (Cubic Yards)	REMAINING CAPACITY (Cubic Yards)	MAX. THROUGHPUT (Tons/Day)	REMAINING CAPACITY DATE	CLOSURE
CWMI, KHF (MSW Landfill B-19)	Kettleman City	4,200,000	303,125	2,000	1/1/2013	12/31/2010
Kettleman Hills – B18 Nonhaz Codisposal	Kettleman City	10,700,000	15,600,000	9,000	2/25/2020	N/A
Olinda Alpha Sanitary Landfill	Santa Ana	148,800,000	17,500,000	8,000	10/1/2020	12/31/2036
Prima Deshecha Landfill	San Juan Capistrano	172,100,000	134,300,000	4,000	11/1/2018	12/31/2102
Sunshine Canyon	Sylmar	140,900,000	77,900,000	12,100	5/31/2018	10/31/2037
Scholl Canyon	Glendale	58,900,000	9,900,000	3,400	4/7/2011	4/1/2030
Simi Valley Landfill & Recycling Center	Simi Valley	119,600,000	82,954,873	9,250	1/1/2019	3/31/2063
Toland Road Landfill	Santa Paula	30,000,000	16,068,864	2,864	12/3/2018	4/30/2033
Total		**1,059,859,365**	**640,294,654**	**100,908**		

Source: CalRecycle 2022
N/A = not applicable

3.18.5.1.3.2 LOS ANGELES COUNTY

LACSD serves the solid waste management needs of a large portion of Los Angeles County (including the City of West Hollywood), with several solid waste landfills, recycling centers, materials recovery/transfer facilities, and waste to energy facilities. Los Angeles County Department of Public Works (LACDPW) annually monitors landfill capacity and disposal rates to ensure that there is sufficient 15-year disposal capacity for the 88 cities within the county and unincorporated communities (LACDPW 2020). LACSD currently serves the RSAs for the KNE San Vicente–Fairfax and Fairfax Alignments.

The Los Angeles County Public Health Department manages enforcement and permitting for facilities that receive and dispose of solid waste. Table 3.18-5 lists the largest active and regulatory permitted solid waste facilities that serve Los Angeles County with their permitted capacity and anticipated closure dates.

Los Angeles County achieved an estimated landfill diversion rate of 60 percent in 2012; 60 percent of solid waste generated in the county was reused, recycled, or diverted from landfills and transformation facilities (LACDPW 2019).

TABLE 3.18-5. LOS ANGELES COUNTY SOLID WASTE DISPOSAL LANDFILL CAPACITY

LANDFILL SITE NAME	LOCATION	MAX. PERMIT CAPACITY (Cubic Yards)	REMAINING CAPACITY (Cubic Yards)	MAX. THROUGHPUT (Tons/Day)	REMAINING CAPACITY DATE	CLOSURE
Antelope Valley Public	Palmdale	30,200,000	17,911,225	5,548	10/31/2017	4/1/2044
Burbank Landfill Site	Burbank	5,933,365	5,174,362	240	1/1/2010	1/1/2053
Calabasas Landfill	Agoura	69,300,000	14,500,000	3,500	12/31/2014	1/1/2029
Chiquita Canyon Sanitary	Castaic	110,366,00	60,408,000	12,000	8/24/2018	1/1/2047
Durbin Inert Debris Engineered Fill Site	Irwindale	1,248,000	N/A	4,000	N/A	12/31/2034
Hanson Aggregates	Irwindale	1,000,000	N/A	4,000	N/A	N/A
Lancaster Landfill and Recycling Center	Lancaster	27,700,000	14,514,648	5,100	8/25/2012	3/1/2044
Peck Road Gravel Pit	Monrovia	3,500,000	3,500,000	4,000	6/1/2009	N/A
Reliance Landfill	Irwindale	2,187,000	N/A	6,000	N/A	1/1/2025
Savage Canyon	Whittier	19,337,450	9,510,833	3,350	12/31/2011	12/31/2055
Scholl Canyon	Glendale	58,900,000	9,900,000	3,400	4/7/2011	4/1/2030
Sunshine Canyon	Sylmar	140,900,000	77,900,000	12,100	5/31/2018	10/31/2037
United Rock Products Pit #2	Irwindale	1,200,000	N/A	3,288	N/A	12/31/2061
Total		**361,405,815**	**213,319,068**	**66,526**		

Source: CalRecycle 2022
N/A = not applicable

3.18.5.1.4 STORMWATER FACILITIES

Urban runoff in the alignment, design option, and MSF RSAs is captured by gutters, catch basins, and culverts and conveyed into underground storm drain systems. 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 (LACFCD) stormwater infrastructure, including drains, channels, catch basins, and debris basins, is present throughout the KNE alignment and station RSAs and the MSF RSAs. Additionally, within city boundaries, local storm drain facilities are owned and operated by each city's public works departments. The LACFCD serves all RSAs for the KNE alignments and stations, the design option, and the MSF.

3.18.5.1.5 NATURAL GAS

The Southern California Gas Company (SoCalGas) provides natural gas service to the KNE RSA. It also provides service to customers in the Cities of Los Angeles, West Hollywood, and Inglewood. Like other private utility suppliers, SoCalGas is regulated by the California Public Utilities Commission. Natural gas from SoCalGas is transported through gas mains located throughout urbanized areas that are maintained by the company. Natural gas comes from the ground and is considered a "fossil fuel" similar to coal and oil. As the Cities of Los Angeles, West Hollywood, and Inglewood experience urban growth, demand for natural gas will increase. New facilities to support this growth would be provided by SoCalGas in accordance with demand.

3.18.5.1.6 TELECOMMUNICATIONS

Telecommunication services include fiber optics, phone, and television cable. Transmission of internet service is available through various broadband technologies such as fiber optic, cable, or fixed wireless. Fiber optic utility owners within the RSAs include AT&T, Spectrum, Airtouch Cellular, Zayo Communications, CenturyLink, and Verizon Business. Telephone service providers include Verizon and AT&T. The RSAs are served by a variety of internet service providers and internet transmission infrastructure and have extensive mobile phone coverage.

3.18.5.1.7 ENERGY

The California Energy Commission's (CEC) 2021 Integrated Energy Policy Report identifies that the state's electricity sector is adapting in response to climate policy and market changes. This includes decarbonizing the state's gas system as a fuel source for electric generation to meet air quality, climate, and other environmental goals. In 2021, total system generation for California was 277,764 gigawatt-hours (GWh), an increase of two percent, or 5,188 GWh, from 2020 (CEC 2021); California experienced above average temperatures and experienced the fourth hottest year since 1895 as drought conditions continued in the state. As a result, annual in-state hydroelectric generation fell by 32 percent from 2020 levels to 14,566 GWh (CEC 2021).

3.18.5.1.7.1 LOS ANGELES DEPARTMENT OF WATER AND POWER

LADWP provides power to an area covering 465 square miles that includes over 4 million residents and 1.4 million power customers. LADWP serves the City of Los Angeles. As of 2021, energy sources consisted of 26 percent natural gas, 35 percent renewable sources, 19 percent coal, 14 percent nuclear, and seven percent hydroelectric resources (LADWP 2021). Total daily generation capacity is over 7,880 megawatts (LADWP 2016). According to CEC data, LADWP customers consumed a total of approximately 20,891 million kilowatt hours (kWh) of electricity in 2021 (CEC 2021).

3.18.5.1.7.2 SOUTHERN CALIFORNIA EDISON

Southern California Edison (SCE) currently serves the City of West Hollywood. SCE, a subsidiary of Edison International, provides electricity to approximately 15 million people in California and is one of the largest electric utilities in the United States (SCE 2019). SCE provides electricity to approximately 180 cities in 11

counties across Central and Southern California. The total electricity usage in the SCE planning area in 2021 was 81,129 million kWh (CEC 2021). As outlined in its 2021 Sustainability Report, SCE aims to deliver 100 percent carbon-free power to retail-sales customers by 2045 (SCE 2021). Sources for carbon-free energy include solar, geothermal, wind, hydro, biomass and biowaste, and nuclear energy.

3.18.6 PROJECT MEASURES

Project measures are design features, best management practices, or other commitments that Metro would implement as part of all proposed alignments, the design option, and the MSF to reduce or avoid environmental effects associated with project construction and operation. Project measures are not the same as mitigation measures, which are used to reduce an environmental impact's significance level. Where applicable, project measures are also discussed in Section 3.18.7 as part of the evaluation of environmental impacts.

There are no project measures specific to utilities and service systems that have been identified.

3.18.7 IMPACT EVALUATION AND MITIGATION MEASURES

This analysis presents the construction and operational impacts for utilities and service systems, as well as any applicable mitigation measures, associated with KNE. A summary of the impact conclusions and applicable mitigation measures is found in Table 3.18-6 in Section 3.18.7.7.

3.18.7.1 IMPACT UTL-1: UTILITY RELOCATION OR CONSTRUCTION OF NEW OR EXPANDED FACILITIES

Impact UTL-1: Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

3.18.7.1.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.18.7.1.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE San Vicente–Fairfax Alignment would either relocate or protect-in-place utilities that would conflict with the cut-and-cover excavations, permanent structures, or the final roadway configuration. Stormwater drainage, sanitary sewers, water lines, electric power lines, natural gas pipelines, oil pipelines, and telecommunications lines would require relocation. Electric power and telecommunication lines within the RSA are sometimes underground in duct banks and sometimes overhead on poles.

When construction of the alignment would conflict with utilities, protecting-in-place is the method of choice because it is less disruptive to streets. However, if a utility mainline conflicts with the temporary engineering, permanent structure, or final roadway configuration, relocation of the utility line would be required. Utility relocations would be coordinated with the utility owner. Relocation of underground utilities would generally be conducted in the following sequence: excavation to the depth of the proposed

utility line, laying of the utility line, 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. After the tie-in with the existing line is complete, the utility line that was in conflict would be removed.

Utilities within the proposed cut-and-cover station excavations, such as high-pressure water mains and gas lines, would be relocated around the construction area or would be lowered and supported in place by hanging from deck beams during construction. The contractor, in coordination with the utility owners, would determine whether to relocate or hang utility lines that cross the cut-and-cover excavation unless it was determined that the utility would be relocated as part of an Advanced Utility Relocation contract related to KNE.

Utility design criteria and operations would conform to applicable sections of the latest federal, state, and local codes and regulations, including ordinances, general regulations, and safety orders, and as required by law. Utility relocations would be designed and constructed in accordance with all applicable provisions set forth by uniform codes, city ordinances, public works standards and any agreement established between Metro and the utility agency.

In addition to utility relocations, new utility service feeds would be installed to accommodate construction needs. These include, but are not limited to, electrical service feeds, telecommunication and fiber service drops, sewer connections for temporary offices located at construction staging sites, and water service feeds for construction equipment, including the tunnel boring machine (TBM). However, impacts of these new utility service feeds would be temporary and would not result in a substantial change in usage of the service providers in the RSA. Most of the light rail transit (LRT) guideway tunnel would be constructed using a TBM that would require electricity. The electricity used to power the TBM would be sourced through a local substation and is not expected to exceed the capacity of the substation. Further discussion with LADWP following the advancement of project design would confirm that substation capacity is adequate for TBM demand.

Watering of construction staging sites would be implemented to reduce fugitive dust. Tunneling would require water for TBM mining (tunneling) and for jet grouting. Tunneling would require the use of slurry, or an engineered mixture of bentonite (a clay-like mineral), and water. The contractor would inject slurry into the front chamber of the TBM to balance soil and groundwater pressures and to carry the excavated material back to the surface. Similarly, the support-of-excavation for the underground stations would require jet grouting, which is typically used to create a groundwater barrier wall. Jet grouting is an engineered technique that injects water, air, and cement-based grout with high-pressure jets of water or grout to remove and loosen soil and replace the removed soil with cement-based grout. While alignment construction would require water, water demand of this magnitude would be temporary and the amount of water consumed would be much less than the projected future capacity shown in Table 3.18-1, Table 3.18-2, and Table 3.18-3 could accommodate. Construction of the project would not use natural gas.

As described above, the alignment would not have significant environmental effects related to relocation or construction of new or expanded water, sewer treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.18.7.1.1.2 OPERATIONAL IMPACTS

The subsections below describe potential operational impacts related to utility relocation or construction of new or expanded facilities.

WATER SUPPLY FACILITIES

Less than Significant Impact. Operation of the KNE San Vicente–Fairfax Alignment would not substantially increase water usage within the RSA. Water would be needed for landscaping, irrigation, and to supply fire sprinkler systems, but the amount required for these operational activities would be much less than the projected future capacity (as shown in Table 3.18-1, Table 3.18-2, and Table 3.18-3) could accommodate and would not have a significant effect on water supply within the RSA. Existing water mains throughout the RSA would provide the infrastructure necessary to support project-related water services. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

WASTEWATER FACILITIES

Less than Significant Impact. Operation of the KNE San Vicente–Fairfax Alignment would introduce minimal increases in wastewater treatment needs. The alignment would be served by LADWP for all stations, except the San Vicente/Santa Monica Station, which would be served by the City of Beverly Hills water supply service area. The alignment would connect to existing wastewater infrastructure for drainage of sump pumps during events when water accumulates in underground stations and the LRT guideway, as needed. Station operation and maintenance would also require connection to existing wastewater infrastructure to support station staff and cleaning. Such activities would minimally alter wastewater mainline flows since they would occur in limited quantities and/or intermittent intervals during events such as maintenance and rainfall. While the alignment would require the construction of new service feeds, it would not require the expansion of any existing wastewater facilities. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

STORMWATER FACILITIES

Less than Significant Impact. Roadway and drainage improvements for the KNE San Vicente–Fairfax Alignment would occur in the areas surrounding the proposed stations. These areas are densely urbanized where existing stormwater infrastructure serves surrounding land uses and roadways. Roadway and drainage improvements for the alignment would introduce minimal to no increases in impervious surfaces and would therefore minimally increase stormwater flow. The alignment would require connection to stormwater facilities to protect project-related equipment during operation by removing any excess water accumulation at underground stations and the LRT guideway. Such activities would minimally alter stormwater mainline flows since they would occur in intermittent intervals during events such as rainfall or initiation of the fire sprinkler systems, when and if needed. Operation of the alignment would comply with stormwater-related federal, local, and state requirements. Existing storm drain facilities have adequate capacity to accommodate stormwater flows associated with the project. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

ELECTRIC POWER

Less than Significant Impact. Operation of the KNE San Vicente–Fairfax Alignment would require electricity to power light rail vehicles (LRVs), lighting, and equipment (such as elevators, escalators, and switches) throughout the LRT guideway and underground stations. Operation of the alignment would require 4,786,003 kWh of annual net electricity use to power the LRT (refer to Section 3.7, Energy, for additional details related to electricity consumption). LADWP delivered more than 20,891 million kWh of electricity to its service area in 2021 and would reasonably be able to accommodate this 0.023 percent increase in electricity use required by the alignment (CEC 2021). SCE delivered 81,128.9 million kWh in its service area and would reasonably be able to accommodate this 0.0059 percent increase in electricity use required by the alignment (CEC 2021). Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

NATURAL GAS

No Impact. There would be no demand for natural gas with the operation of the KNE San Vicente–Fairfax Alignment. Therefore, the alignment would not require the expansion of any existing facilities or construction of any new facilities, and it would have no impact during operation.

TELECOMMUNICATION

Less than Significant Impact. Telecommunication connections for a distributed antenna system would be installed at stations and in certain locations along the LRT guideway. 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 tunnel; it places several smaller, less-powerful antennas in different locations instead of one large, powerful antenna. The alignment would install 50-foot-tall antenna towers in the vicinity of station portals. Such telecommunication connections would require tie-in to existing telecommunication infrastructure. However, since the alignment is located in a densely urbanized setting where overhead and underground telecommunication infrastructure exists, such expansion to accommodate the antennas, additional cables, and utility cabinets would not cause significant environmental effects.

The project would also require an additional communication transmission system to operate train signals and security cameras. The communication transmission system would be a new system installed within the tunnel and underground stations that would be owned and maintained by Metro. The communication transmission system would not require coordination with third-party utility owners nor cause significant environmental effects. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

UTILITY RELOCATION AND CONSTRUCTION OPERATIONAL IMPACT CONCLUSION

Less than Significant Impact. Based on the impact evaluation described in the subsections above, the KNE San Vicente–Fairfax Alignment would have a less than significant impact overall related to utility relocation and construction of new or expanded facilities during operation.

3.18.7.1.2 KNE FAIRFAX ALIGNMENT

3.18.7.1.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE Fairfax Alignment would either relocate or protect-in-place utilities that would conflict with the cut-and-cover excavations, permanent structures, or the final roadway configuration. Stormwater drainage, sanitary sewers, water lines, electric power lines, natural gas pipelines, oil pipelines, and telecommunications lines would require relocation. Electric power and telecommunication lines within the RSA are sometimes underground in duct banks and sometimes overhead on poles.

When construction of the alignment would conflict with utilities, protecting-in-place is the method of choice because it is less disruptive to streets. However, if a utility mainline conflicts with the temporary engineering, permanent structure, or final roadway configuration, relocation of the utility line would be required. Utility relocations would be coordinated with the utility owner. Relocation of underground utilities would generally be conducted in the following sequence: excavation to the depth of the proposed utility line, laying of the utility line, 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. After the tie-in with the existing line is complete, the utility line that was in conflict would be removed.

Utilities within the proposed cut-and-cover station excavations, such as high-pressure water mains and gas lines, would be relocated around the construction area or would be lowered and supported in place by hanging from deck beams during construction. The contractor, in coordination with the utility owners, would determine whether to relocate or hang utility lines that cross the cut-and-cover excavation unless it was determined that the utility would be relocated as part of an Advanced Utility Relocation contract related to KNE.

Utility design criteria and operations would conform to applicable sections of the latest federal, state, and local codes and regulations, including ordinances, general regulations, and safety orders, and as required by law. Utility relocations would be designed and constructed in accordance with all applicable provisions set forth by uniform codes, city ordinances, public works standards, and any agreement established between Metro and the utility agency.

In addition to utility relocations, new utility service feeds would be installed to accommodate construction needs. These include, but are not limited to, electrical service feeds, telecommunication and fiber service drops, sewer connections for temporary offices located at construction staging sites, and water service feeds for construction equipment, including the TBM. However, impacts of these new utility service feeds would be temporary and would not result in a substantial change in usage of the service providers in the RSA. Most of the LRT guideway tunnel would be constructed using a TBM that would require electricity. The electricity used to power the TBM would be sourced through a local substation and is not expected to exceed the capacity of the substation. Further discussion with LADWP following the advancement of project design would confirm that substation capacity is adequate for TBM demand.

Watering of construction staging sites would be implemented to reduce fugitive dust. Tunneling would require water for TBM tunneling and for jet grouting. Tunneling would require the use of slurry, or an engineered mixture of bentonite (a clay-like mineral), and water. The contractor would inject slurry into the front chamber of the TBM to balance soil and groundwater pressures and to carry the excavated material back to the surface. Similarly, the support-of-excavation for the underground stations would require jet grouting, which is typically used to create a groundwater barrier wall. Jet grouting is an engineered technique that injects water, air, and cement-based grout with high-pressure jets of water or grout to remove and loosen soil and replace the removed soil with cement-based grout. While alignment construction would require water, water demand of this magnitude would be temporary and the amount of water consumed would be much less than the projected future capacity (shown in Table 3.18-1, Table 3.18-2, and Table 3.18-3) could accommodate. Construction of the project would not use natural gas.

As described above, the alignment would not have significant environmental effects related to relocation or construction of new or expanded water, sewer treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.18.7.1.2.2 OPERATIONAL IMPACTS

The subsections below describe potential operational impacts related to utility relocation or construction of new or expanded facilities.

WATER SUPPLY FACILITIES

Less than Significant Impact. Operation of the KNE Fairfax Alignment would not substantially increase water usage within the RSA. Water would be needed for landscaping, irrigation, and to supply fire sprinkler systems, but the amount of water needed for operational activities would still be much less than the projected future capacity (as shown in Table 3.18-1 and Table 3.18-2) could accommodate and would not have a significant effect on the water supply within the RSA. Existing water mains throughout the RSA would provide the infrastructure necessary to support project-related water services. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

WASTEWATER FACILITIES

Less than Significant Impact. Operation of the KNE Fairfax Alignment would introduce minimal increases in wastewater treatment needs. The alignment would be served by LADWP for all stations. The alignment would connect to existing wastewater infrastructure for drainage of sump pumps during events when water accumulates in underground stations and the LRT guideway, as needed. Station operation and maintenance would also require connection to existing wastewater infrastructure to support station staff and cleaning. Such activities would minimally alter wastewater mainline flows since they would occur in limited quantities and/or intermittent intervals during events such as maintenance and rainfall. While the alignment would require the construction of new service feeds, it would not require the expansion of any existing wastewater facilities. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

STORMWATER FACILITIES

Less than Significant Impact. Roadway and drainage improvements for the KNE Fairfax Alignment would occur in the areas surrounding the proposed stations. These areas are densely urbanized where existing stormwater infrastructure serves surrounding land uses and roadways. Roadway and drainage improvements for the alignment would introduce minimal to no increases in impervious surfaces and would therefore minimally increase stormwater flow. The alignment would require connection to stormwater facilities to protect project-related equipment during operation by removing any excess water accumulation at underground stations and the LRT guideway. Such activities would minimally alter stormwater mainline flows since they would occur in intermittent intervals during events such as rainfall or initiation of the fire sprinkler systems, when and if needed. Operation of the alignment would comply with stormwater-related federal, local, and state requirements. Existing storm drain facilities have adequate capacity to accommodate stormwater flows associated with the project. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

ELECTRIC POWER

Less than Significant Impact. Operation of the KNE Fairfax Alignment would require electricity to power LRVs, lighting, and equipment (such as elevators, escalators, and switches) throughout the LRT guideway and underground stations. Operation of the alignment would require 3,789,853 kWh of annual net electricity use to power the LRT (refer to Section 3.7, Energy, for additional details related to electricity consumption). LADWP delivered more than 20,891 million kWh of electricity to its service area in 2021 and would reasonably be able to accommodate this 0.018 percent increase in electricity use required by the alignment (CEC 2021). Similarly, SCE delivered 81,129 million kWh in 2021 and would be able to accommodate this 0.0047 percent increase in electricity use required by the alignment (CEC 2021). Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

NATURAL GAS

No Impact. There would be no demand for natural gas for operation of the KNE Fairfax Alignment. Therefore, the alignment would not require the expansion of any existing facilities or construction of any new facilities, and it would have no impact during operation.

TELECOMMUNICATION

Less than Significant Impact. Telecommunication connections for a distributed antenna system would be installed at stations and in certain locations along the LRT guideway. 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 tunnel; it places several smaller, less-powerful antennas in different locations instead of one large, powerful antenna. The alignment would install 50-foot-tall antenna towers in the vicinity of station portals. Such telecommunication connections would require tie-in to existing telecommunication infrastructure. However, since the alignment is located in a densely urbanized setting where overhead and underground telecommunication infrastructure exists, such expansion to accommodate the antennas, additional cables, and utility cabinets would not cause significant environmental effects.

The project would also require an additional communication transmission system to operate train signals and security cameras. The communication transmission system would be a new system installed within the tunnel and underground stations that would be owned and maintained by Metro. The communication transmission system would not require coordination with third-party utility owners nor cause significant environmental effects. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

UTILITY RELOCATION AND CONSTRUCTION OPERATIONAL IMPACT CONCLUSION

Less than Significant Impact. Based on the impact evaluation described in the subsections above, the KNE Fairfax Alignment would have a less than significant impact overall related to utility relocation and construction of new or expanded facilities during operation.

3.18.7.1.3 KNE LA BREA ALIGNMENT

3.18.7.1.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE La Brea Alignment would either relocate or protect-in-place utilities that would conflict with the cut-and-cover excavations, permanent structures, or the final roadway configuration. Stormwater drainage, sanitary sewers, water lines, electric power lines, natural gas pipelines, oil pipelines, and telecommunications lines would require relocation. Electric power and telecommunication lines within the RSA are sometimes underground in duct banks and sometimes overhead on poles.

When construction of the alignment would conflict with utilities, protecting-in-place is the method of choice because it is less disruptive to streets. However, if a utility mainline conflicts with the temporary engineering, permanent structure, or final roadway configuration, relocation of the utility line would be required. Utility relocations would be coordinated with the utility owner. Relocation of underground utilities would generally be conducted in the following sequence: excavation to the depth of the proposed utility line, laying of the utility line, 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. After the tie-in with the existing line is complete, the utility line that was in conflict would be removed.

Utilities within the proposed cut-and-cover station excavations, such as high-pressure water mains and gas lines, would be relocated around the construction area or would be lowered and supported in place by hanging from deck beams during construction. The contractor, in coordination with the utility owners, would determine whether to relocate or hang utility lines that cross the cut-and-cover excavation unless it was determined that the utility would be relocated as part of an Advanced Utility Relocation contract related to KNE.

Utility design criteria and operations would conform to applicable sections of the latest federal, state, and local codes and regulations, including ordinances, general regulations, and safety orders, and as required by law. Utility relocations would be designed and constructed in accordance with all applicable provisions

set forth by uniform codes, city ordinances, public works standards, and any agreement established between Metro and the utility agency.

In addition to utility relocations, new utility service feeds would be installed to accommodate construction needs. These include, but are not limited to, electrical service feeds, telecommunication and fiber service drops, sewer connections for temporary offices located at construction staging sites, and water service feeds for construction equipment, including the TBM. However, impacts of these new utility service feeds would be temporary and would not result in a substantial change in usage of the service providers in the RSA. Most of the LRT guideway tunnel would be constructed using a TBM that would require electricity. The electricity used to power the TBM would be sourced through a local substation and is not expected to exceed the capacity of the substation. Further discussion with LADWP following the advancement of project design would confirm that substation capacity is adequate for TBM demand.

Watering of construction staging sites would be implemented to reduce fugitive dust. Tunneling would require water for TBM tunneling and for jet grouting. Tunneling would require the use of slurry, or an engineered mixture of bentonite (a clay-like mineral), and water. The contractor would inject slurry into the front chamber of the TBM to balance soil and groundwater pressures and to carry the excavated material back to the surface. Similarly, the support-of-excavation for the underground stations would require jet grouting, which is typically used to create a groundwater barrier wall. Jet grouting is an engineered technique that injects water, air, and cement-based grout with high-pressure jets of water or grout to remove and loosen soil and replace the removed soil with cement-based grout. While alignment construction would require water, water demand of this magnitude would be temporary and the amount of water consumed would be much less than the projected future capacity (shown in Table 3.18-1, Table 3.18-2, and Table 3.18-3) could accommodate. Construction of the project would not use natural gas.

As described above, the alignment would not have significant environmental effects related to relocation or construction of new or expanded water, sewer treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.18.7.1.3.2 OPERATIONAL IMPACTS

The subsections below describe potential operational impacts related to utility relocation or construction of new or expanded facilities.

WATER SUPPLY FACILITIES

Less than Significant Impact. Operation of the KNE La Brea Alignment would not substantially increase water usage within the RSA. Water would be needed for landscaping, irrigation, and to supply fire sprinkler systems, but the amount of water needed for operational activities would still be much less than the projected future capacity (shown in Table 3.18-1 and Table 3.18-2) could accommodate and would not have a significant effect on the water supply within the RSA. Existing water mains throughout the RSA would provide the infrastructure necessary to support project-related water services. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

WASTEWATER FACILITIES

Less than Significant Impact. Operation of the KNE La Brea Alignment would introduce minimal increases in wastewater treatment needs. The alignment would be served by LADWP for all stations. The alignment would connect to existing wastewater infrastructure for drainage of sump pumps during events when water accumulates in underground stations and the LRT guideway, as needed. Station operation and maintenance would also require connection to existing wastewater infrastructure to support station staff and cleaning. Such activities would minimally alter wastewater mainline flows since they would occur in limited quantities and/or intermittent intervals during events such as maintenance and rainfall. While the alignment would require the construction of new service feeds, it would not require the expansion of any existing wastewater facilities. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

STORMWATER FACILITIES

Less than Significant Impact. Roadway and drainage improvements for the KNE La Brea Alignment would occur in the areas surrounding the proposed stations. These areas are densely urbanized where existing stormwater infrastructure serves surrounding land uses and roadways. Roadway and drainage improvements for the alignment would introduce minimal to no increases in impervious surfaces and would therefore minimally increase stormwater flow. The alignment would require connection to stormwater facilities to protect project-related equipment during operation by removing any excess water accumulation at underground stations and the LRT guideway. Such activities would minimally alter stormwater mainline flows since they would occur in intermittent intervals during events such as rainfall or initiation of the fire sprinkler systems, when and if needed. Operation of the alignment would comply with stormwater-related federal, local, and state requirements. Existing storm drain facilities have adequate capacity to accommodate stormwater flows associated with the project. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

ELECTRIC POWER

Less than Significant Impact. Operation of the KNE La Brea Alignment would require electricity to power LRVs, lighting, and equipment (such as elevators, escalators, and switches) throughout the LRT guideway and underground stations. Operation of the alignment would require 2,969,648 kWh of annual net electricity use to power the LRT (refer to Section 3.7, Energy, for additional details related to electricity consumption). LADWP delivered more than 20,891 million kWh of electricity to its service area in 2021 and would reasonably be able to accommodate this 0.014 percent increase in electricity use required by the alignment (CEC 2021). Similarly, SCE delivered 81,129 million kWh in 2021 and would be able to accommodate this 0.0037 percent increase in electricity use required by the alignment (CEC 2021). Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

NATURAL GAS

No Impact. There would be no demand for natural gas for operation of the KNE La Brea Alignment. Therefore, the alignment would not require the expansion of any existing facilities or construction of any new facilities, and it would have no impact during operation.

TELECOMMUNICATION

Less than Significant Impact. Telecommunication connections for a distributed antenna system would be installed at stations and in certain locations along the LRT guideway. 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 tunnel; it places several smaller, less-powerful antennas in different locations instead of one large, powerful antenna. The alignment would install 50-foot-tall antenna towers in the vicinity of station portals. Such telecommunication connections would require tie-in to existing telecommunication infrastructure. However, since the alignment is located in a densely urbanized setting where overhead and underground telecommunication infrastructure exists, such expansion to accommodate the antennas, additional cables, and utility cabinets would not cause significant environmental effects.

The project would also require an additional communication transmission system to operate train signals and security cameras. The communication transmission system would be a new system installed within the tunnel and underground stations that would be owned and maintained by Metro. The communication transmission system would not require coordination with third-party utility owners nor cause significant environmental effects. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

UTILITY RELOCATION AND CONSTRUCTION OPERATIONAL IMPACT CONCLUSION

Less than Significant Impact. Based on the impact evaluation described in the subsections above, the KNE La Brea Alignment would have a less than significant impact overall related to utility relocation and construction of new or expanded facilities during operation.

3.18.7.1.4 HOLLYWOOD BOWL DESIGN OPTION

3.18.7.1.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The Hollywood Bowl Design Option would use the sequential excavation method (SEM) for construction of the alignment and the proposed Hollywood Bowl Station instead of the TBM and the cut-and-cover approach used for the alignments and stations. Since excavation would not alter the street-level surface, utility hanging and relocations would not be necessary for the Hollywood Bowl Station excavation. Relocations would be anticipated for the build-out of the station and final configuration of the roadway. Utility relocations would be designed and constructed in accordance with all applicable provisions set forth by uniform codes, city ordinances, and public works standards.

Construction of the design option would have similar effects on utilities service and systems as described for the alignments and would not require significant construction of new facilities beyond those already addressed as part of the project; therefore, construction of the design option would result in a less than significant impact on water, wastewater, stormwater, electric power, and telecommunication facilities. Natural gas would not be used during construction of the design option, and there would be no impact to natural gas facilities. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.18.7.1.4.2 OPERATIONAL IMPACTS

The subsections below describe potential operational impacts related to utility relocation or construction of new or expanded facilities.

WATER SUPPLY FACILITIES

Less than Significant Impact. Operation of the Hollywood Bowl Design Option would not substantially increase water usage within the region. Water would be needed for landscaping, irrigation, and to supply fire sprinkler systems. The amount consumed would be much less than the projected future capacity (shown in Table 3.18-1 and Table 3.18-2) could accommodate and would not have a significant effect on the water supply. Existing watermains throughout the design option RSA would provide the infrastructure necessary to connect to project-related water services, and expansion of existing facilities or construction of new facilities would not be required. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

WASTEWATER FACILITIES

Less than Significant Impact. Operation of the Hollywood Bowl Design Option would introduce minimal increases in wastewater treatment needs. The design option would connect to existing wastewater infrastructure for drainage during events when water accumulates in underground stations and the LRT guideway, as needed. Station operation and maintenance would also require connection to existing wastewater infrastructure to support station staff and cleaning. Such activities would minimally alter wastewater mainline flows since they would occur in limited quantities and/or intermittent intervals during events such as maintenance and rainfall. While the design option would require the construction of new service feeds, it would not require the expansion of any existing wastewater facilities. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

STORMWATER FACILITIES

Less than Significant Impact. Roadway and drainage improvements for the Hollywood Bowl Design Option would occur at the areas surrounding the proposed Hollywood Bowl Station. These areas are densely urbanized where existing stormwater infrastructure serves surrounding land uses and roadways. Roadway and drainage improvements for the design option would introduce minimal to no increases in impervious surfaces and would therefore minimally increase stormwater flow. Additionally, operation of the design option would require connection to stormwater facilities to protect project-related equipment by removing any excess water accumulation at the underground station and the guideway. Such activities would minimally alter stormwater mainline flows since they would occur in intermittent intervals during events such as rainfall or fire sprinkler systems when and if needed. Existing storm drain infrastructure has adequate capacity to accommodate stormwater flows associated with the design option without requiring expansions. Operation of the design option would comply with stormwater-related federal, local, and state requirements. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

ELECTRIC POWER

Less than Significant Impact. Operation of the Hollywood Bowl Design Option would require electricity to power LRVs, lighting, and equipment (such as elevators, escalators, and switches) throughout the LRT guideway and underground station. Operation of the design option would require 529,668 kWh of annual net electricity use to power the LRT (refer to Section 3.7, Energy, for additional details related to electricity consumption). LADWP delivered more than 20,891 million kWh of electricity to its service area in 2021 and would reasonably be able to accommodate this 0.0025 percent increase in electricity use required by the design option (CEC 2021). Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

NATURAL GAS

No Impact. There would be no demand for natural gas for operation of the Hollywood Bowl Design Option. Therefore, the design option would not require the expansion of any existing facilities or construction of any new facilities, and it would have no impact during operation.

TELECOMMUNICATION

Less than Significant Impact. Minor telecommunication connections for a distributed antenna system would be installed at the station and in certain locations along the LRT guideway. 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 tunnel; it places several smaller, less-powerful antennas in different locations instead of one large, powerful antenna. The design option would install a 50-foot-tall antenna tower in the vicinity of the station portal. Such telecommunication connections would require tie-in to existing telecommunication infrastructure. However, since the design option is located in a densely urbanized setting where overhead and underground telecommunication infrastructure exists, such expansion to accommodate the antennas, additional cables, and utility cabinets would not cause significant environmental effects.

The project would also require an additional communication transmission system to operate train signals and security cameras. The communication transmission system would be a new system installed within the tunnel and underground stations that would be owned and maintained by Metro. The communication transmission system would not require coordination with third-party utility owners nor cause significant environmental effects. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

UTILITY RELOCATION AND CONSTRUCTION OPERATIONAL IMPACT CONCLUSION

Less than Significant Impact. Based on the impact evaluation described in the subsections above, the Hollywood Bowl Design Option would have a less than significant impact overall related to utility relocation and construction of new or expanded facilities during operation.

3.18.7.1.5 MAINTENANCE AND STORAGE FACILITY

3.18.7.1.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Various new utility service feeds would be installed to accommodate construction and operation needs for the MSF. These include, but are not limited to, electrical service feeds and water service feeds for maintenance of the construction service yard. Natural gas would not be used during construction of the MSF, and no expanded utility mainlines would be necessary for construction of the MSF. The MSF would have a less than significant impact on water, wastewater treatment, stormwater drainage, electric power, and telecommunications facilities during construction. Because natural gas would not be used during construction of the MSF, there would be no impact on natural gas facilities during construction. Therefore, the MSF would have a less than significant impact during construction.

3.18.7.1.5.2 OPERATIONAL IMPACTS

The subsections below describe potential operational impacts related to utility relocation or construction of new or expanded facilities.

WATER SUPPLY FACILITIES

Less than Significant Impact. During operations, the MSF would consume water for landscaping irrigation, vehicle washing, and employee breakroom/kitchen uses. The MSF would be located within the MWD and LADWP service areas. Projected future demand within the service areas is shown in Table 3.18-1 and Table 3.18-2. It is anticipated that operation of the MSF would result in an increase in water use; however, the amount consumed would be much less than the projected future capacity could accommodate and would not have a significant effect on the water supply. Therefore, the MSF would have a less than significant impact during operation.

WASTEWATER FACILITIES

Less than Significant Impact. Operation of the MSF would produce wastewater related to washing LRVs and use of employee restrooms. The City of Los Angeles has sufficient wastewater treatment capacity to serve the MSF because only a minimal amount of wastewater would be generated by the project. Therefore, the MSF would have a less than significant impact during operation.

STORMWATER FACILITIES

Less than Significant Impact. Roadway and drainage improvements would occur in the area surrounding the MSF. This area is densely urbanized, and existing stormwater infrastructure serves the surrounding land uses and roadways. During operations, the MSF would introduce minimal to no impervious surfaces and would minimally increase stormwater flow. Operation of the MSF would comply with stormwater-related federal, local, and state stormwater requirements. Existing storm drain facilities have adequate capacity to accommodate stormwater flows associated with the MSF. Therefore, the MSF would have a less than significant impact during operation.

ELECTRIC POWER

Less than Significant Impact. Operation of the MSF would require electricity to power lighting and maintenance equipment and would require approximately 310,088 kWh of annual net electricity use. This would represent a 0.0015 percent increase in electricity use, which LADWP would reasonably be able to accommodate (CEC 2021). Therefore, the MSF would have a less than significant impact during operation.

NATURAL GAS

Less than Significant Impact. Operation of the MSF would require 49,347 kBtu of annual natural gas for space and water heating (refer to Section 3.7, Energy, for additional details related to electricity consumption). In 2021, SCG delivered 50,998 million kBtu for its service area (CEC 2021). SCG declares itself a "reactive" utility that would provide natural gas as customers request its services and would be able to accommodate the 0.0000097 percent increase in natural gas consumption from the MSF. SCG would have adequate supply of natural gas to serve the MSF. Therefore, the MSF would have a less than significant impact during operation.

TELECOMMUNICATION

Less than Significant Impact. During operations, the MSF would use its own telecommunications infrastructure (e.g., server rooms, network equipment, cabling systems, intercom systems, phones). Therefore, the MSF would have a less than significant impact during operation.

UTILITY RELOCATION AND CONSTRUCTION OPERATIONAL IMPACT CONCLUSION

Less than Significant Impact. Based on the impact evaluation described in the subsections above, the MSF would have a less than significant impact overall related to utility relocation and construction of new or expanded facilities during operation.

3.18.7.2 IMPACT UTL-2: WATER SUPPLIES

Impact UTL-2: Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

3.18.7.2.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.18.7.2.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction activities associated with the KNE San Vicente–Fairfax Alignment would not substantially increase water usage. Construction needs include water service feeds for temporary offices located at construction staging sites. Tunneling would require water for TBM mining and jet grouting when needed. Watering of construction staging sites would be anticipated for dust control; the amount of water used for dust control would vary depending on the amount of exposed soil requiring dust suppression and the weather conditions when soil is exposed (e.g., increased frequency of wetting exposed soils would be required during hot and dry conditions as opposed to a lower frequency during cool and moist conditions). Therefore, the amount of water used during construction would vary.

Further, any water use would comply with Metro's Water Use and Conservation Policy, which limits use of potable water during construction when feasible.

The amount of water consumed for construction of the alignment would be much less than the projected future capacity (shown in Table 3.18-1, Table 3.18-2, and Table 3.18-3) could accommodate and would not have a significant effect on the water supply. The increase in water use associated with the alignment during construction would not significantly contribute to the overall projected increase in water use in MWD, LADWP, and the City of Beverly Hills' service areas compared to existing uses. MWD, LADWP, and the City of Beverly Hills have adequate water supplies to meet future demand; water supply quantities are listed in their respective 2020 Urban Water Management Plans (UWMPs) for normal, dry, or multiple dry years (MWD 2021; LADWP 2021; City of Beverly Hills 2021). Future water supply demand in the UWMPs is based on SCAG's 2020 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which accounts for KNE in its project list (SCAG 2020b). Construction-related water use would not necessitate new water deliveries to the region.

As described above, construction activities would not substantially deplete water supplies during normal, dry, or multiple dry years. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.18.7.2.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE San Vicente–Fairfax Alignment would not substantially increase water usage. The 2020 UWMPs for MWD, LADWP, and the City of Beverly Hills considers population growth within the RSA in their projections of future water use demands within their service areas. The KNE San Vicente–Fairfax Alignment would not result in the creation of housing or infrastructure that would induce or accelerate population or household growth that is not already anticipated in SCAG's regional growth projections.

Operational activities or features that would require long-term, permanent sources of water use include landscape irrigation and fire water systems if and when needed. This water demand would be a slight increase and would not affect water supplies. Further, any water use would comply with Metro's Water Use and Conservation Policy, which requires water efficiency and conservation methods to be adopted and maintained.

The increase in water use associated with operation of the alignment would not significantly contribute to the overall projected increase in water use in MWD, LADWP, and the City of Beverly Hills service areas compared to their existing uses. MWD, LADWP, and the City of Beverly Hills have adequate supplies to meet future demand; water supply quantities are listed in their respective 2020 UWMPs for normal, dry, or multiple dry years (MWD 2021; LADWP 2021; City of Beverly Hills 2021). Future water supply demand in the UWMPs is based on SCAG's 2020 RTP/SCS, which accounts for KNE in its project list (SCAG 2020b).

As described above, operation of the KNE San Vicente–Fairfax Alignment would not significantly deplete municipal water supplies during normal, dry, or multiple dry years. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.18.7.2.2 KNE FAIRFAX ALIGNMENT

3.18.7.2.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction activities associated with the KNE Fairfax Alignment would not substantially increase water usage. Construction needs include water service feeds for temporary offices located at construction staging sites. Tunneling would require water for TBM mining and jet grouting when needed. Watering of construction staging sites would be anticipated for dust control; the amount of water used for dust control would vary depending on the amount of exposed soil requiring dust suppression and the weather conditions when soil is exposed (e.g., increased frequency of wetting exposed soils would be required during hot and dry conditions as opposed to a lower frequency during cool and moist conditions). Therefore, the amount of water used during construction would vary. Further, any water use would comply with Metro's Water Use and Conservation Policy, which limits use of potable water during construction when feasible.

The amount of water consumed for construction of the alignment would be much less than the projected future capacity (shown in Table 3.18-1 and Table 3.18-2) could accommodate and would not have a significant effect on the water supply. The increase in water use associated with the alignment during construction would not significantly contribute to the overall projected increase in water use in MWD and LADWP's service areas compared to existing uses. MWD and LADWP have adequate water supplies to meet future demand; water supply quantities are listed in their respective 2020 UWMPs for normal, dry, or multiple dry years (MWD 2021; LADWP 2021). Future water supply demand in the UWMPs is based on SCAG's 2020 RTP/SCS, which accounts for KNE in its project list (SCAG 2020b). Construction-related water use would not necessitate new water deliveries to the region.

As described above, construction activities would not substantially deplete water supplies during normal, dry, or multiple dry years. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.18.7.2.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE Fairfax Alignment would not substantially increase water usage. The 2020 UWMPs for MWD and LADWP consider population growth within the RSA to project future water use demands within their service areas. The KNE Fairfax Alignment would not result in the creation of housing or infrastructure that would induce or accelerate population or household growth that is not already anticipated in SCAG's regional growth projections.

Operational activities or features that would require long-term, permanent sources of water use include landscape irrigation and fire water systems if and when needed. This water demand would be a slight increase and would not affect water supplies. Further, any water use would comply with Metro's Water Use and Conservation Policy, which requires water efficiency and conservation methods to be adopted and maintained.

The increase in water use associated with operation of the alignment would not significantly contribute to the overall projected increase in water use in MWD and LADWP service areas compared to their existing uses. MWD and LADWP have adequate supplies to meet future demand, and water supply quantities are listed in their respective 2020 UWMPs for normal, dry, or multiple dry years (MWD 2021; LADWP 2021b). Future water supply demand in the UWMPs is based on SCAG's 2020 RTP/SCS, which accounts for KNE in its project list (SCAG 2020b).

For the reasons described above, operation of the KNE Fairfax Alignment would not substantially deplete municipal water supplies during normal, dry, or multiple dry years. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.18.7.2.3 KNE LA BREA ALIGNMENT

3.18.7.2.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction activities associated with the KNE La Brea Alignment would not substantially increase water usage. Construction needs include water service feeds for temporary offices located at construction staging sites. Tunneling would require water for TBM mining and jet grouting when needed. Watering of construction staging sites would be anticipated for dust control; the amount of water used for dust control would vary depending on the amount of exposed soil requiring dust suppression and the weather conditions when soil is exposed (e.g., increased frequency of wetting exposed soils would be required during hot and dry conditions as opposed to a lower frequency during cool and moist conditions). Therefore, the amount of water used during construction would vary. Further, any water use would comply with Metro's Water Use and Conservation Policy, which limits use of potable water during construction when feasible.

The amount of water consumed for construction of the alignment would be much less than the projected future capacity (shown in Table 3.18-1 and Table 3.18-2) could accommodate and would not have a significant effect on the water supply. The increase in water use associated with the alignment during construction would not significantly contribute to the overall projected increase in water use in MWD and LADWP's service areas compared to existing uses. MWD and LADWP have adequate water supplies to meet future demand; water supply quantities are listed in their respective 2020 UWMPs for normal, dry, or multiple dry years (MWD 2021; LADWP 2021). Future water supply demand in the UWMPs is based on SCAG's 2020 RTP/SCS, which accounts for KNE in its project list (SCAG 2020b). Construction-related water use would not necessitate new water deliveries to the region.

As described above, construction activities would not substantially deplete water supplies during normal, dry, or multiple dry years. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.18.7.2.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE La Brea Alignment would not substantially increase water usage. The 2020 UWMPs for MWD and LADWP consider population growth within the RSA to project future water use demands within their service areas. The KNE La Brea Alignment would not result

in the creation of housing or infrastructure that would induce or accelerate population or household growth that is not already anticipated in SCAG's regional growth projections.

Operational activities or features that would require long-term, permanent sources of water use include landscape irrigation and fire water systems if and when needed. This water demand would be a slight increase and would not affect water supplies. Further, any water use would comply with Metro's Water Use and Conservation Policy, which requires water efficiency and conservation methods to be adopted and maintained.

The increase in water use associated with operation of the alignment would not significantly contribute to the overall projected increase in water use in MWD and LADWP service areas compared to their existing uses. MWD and LADWP have adequate supplies to meet future demand, and water supply quantities are listed in their respective 2020 UWMPs for normal, dry, or multiple dry years (MWD 2021; LADWP 2021b). Future water supply demand in the UWMPs is based on SCAG's 2020 RTP/SCS, which accounts for KNE in its project list (SCAG 2020b).

For the reasons described above, operation of the KNE La Brea Alignment would not substantially deplete municipal water supplies during normal, dry, or multiple dry years. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.18.7.2.4 HOLLYWOOD BOWL DESIGN OPTION

3.18.7.2.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The Hollywood Bowl Design Option would not substantially increase water usage during construction activities. Tunneling would require water for SEM mining and jet grouting when needed. Any water use would comply with Metro's Water Use and Conservation Policy, which limits use of potable water during construction when feasible.

The amount of water consumed for construction of the design option would be much less than the projected future capacity (shown in Table 3.18-1 and Table 3.18-2) could accommodate and would not have a significant effect on the water supply. The increase in water use during construction would not significantly contribute to the overall projected increase in water use in the MWD and LADWP service areas compared to existing uses. MWD and LADWP have adequate supplies to meet future demand; water supply quantities are listed in the respective 2020 UWMPs for normal, dry, or multiple dry years (MWD 2021; LADWP 2021b). Future water supply demand in the UWMPs is based on SCAG's 2020 RTP/SCS, which accounts for KNE in its project list (SCAG 2020b). Construction-related water use would not necessitate new water deliveries to the region.

For the reasons described above, construction activities would not substantially deplete water supplies during normal, dry, or multiple dry years. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.18.7.2.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the Hollywood Bowl Design Option would not substantially increase water usage. The 2020 UWMPs for MWD and LADWP consider population growth within the RSA to project future water use demands within their service areas. The design option would not result in the creation of housing or infrastructure that would induce or accelerate population or household growth that is not already anticipated in SCAG's regional growth projections.

Operational activities or features that would require long-term, permanent sources of water use include landscape irrigation and fire water systems if and when needed. This water demand would be a slight increase and would not affect water supplies. Further, any water use would comply with Metro's Water Use and Conservation Policy, which requires water efficiency and conservation methods to be adopted and maintained.

The increase in water use associated with the design option would not significantly contribute to the overall projected increase in water use in the MWD and LADWP service areas compared to their existing uses. MWD and LADWP have adequate supplies to meet future demand and water supply quantities are listed in their respective 2020 UWMPs for normal, dry, or multiple dry years (MWD 2021; LADWP 2021b). Future water supply demand in the UWMPs is based on SCAG's 2020 RTP/SCS, which accounts for KNE in its project list (SCAG 2020b).

For the reasons described above, operation of the Hollywood Bowl Design Option would not substantially deplete municipal water supplies during normal, dry, or multiple dry years. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.18.7.2.5 MAINTENANCE AND STORAGE FACILITY

3.18.7.2.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. New water utility service feeds would be installed to accommodate construction and operation of the MSF. The MSF would be located within the MWD and LADWP service areas. Construction needs include water service feeds for temporary offices located at construction staging sites. Watering of construction staging sites would be needed for dust control. The amount of water used for dust control would vary depending on the amount of exposed soil requiring dust suppression and the weather conditions when soil is exposed (e.g., increased frequency of wetting exposed soils would be required during hot and dry conditions as opposed to a lower frequency during cool and moist conditions). Therefore, the amount of water used during construction would vary. Further, any water use would comply with Metro's Water Use and Conservation Policy, which limits use of potable water during construction when feasible.

The amount of water consumed for construction of the MSF would be much less than the projected future capacity could accommodate and would not have a significant effect on the water supply. Future demand within the service area is described in Table 3.18-1 and Table 3.18-2. The increase in water use during construction would not significantly contribute to the overall projected increase in water use in MWD and LADWP's service areas compared to existing uses. MWD and LADWP have adequate supplies to

meet future normal, dry, or multiple dry years. Projected water supplies quantities are included in their respective 2020 UWMPs for normal, dry, or multiple dry years (MWD 2021; LADWP 2021b). Future water supply demand in the UWMPs is based on SCAG's 2020 RTP/SCS, which accounts for KNE in its project list (SCAG 2020b). Construction-related water use would not necessitate new water deliveries to the region.

New water utility service feeds would be installed to accommodate construction and operation of the MSF. Therefore, the MSF would have a less than significant impact during construction.

3.18.7.2.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. During operation, the MSF would consume water for landscape irrigation, vehicle washing, and employee breakroom/kitchen uses. The MSF would be located within the MWD and LADWP service areas. Operation of the MSF would result in a slight increase in water use; however, the amount consumed would be much less than the projected future capacity could accommodate and would not have a significant effect on the water supply. Future demand is described in Table 3.18-1 and Table 3.18-2.

Operation of the MSF would not substantially increase water usage in municipal water use service areas. The 2020 UWMPs for MWD and LADWP consider population growth within the RSA to project future water use demands within their service areas. The MSF would not result in the creation of housing or infrastructure that would induce or accelerate population or household growth that is not already anticipated in SCAG's regional growth projections. Water demand for the MSF would be a slight increase compared to existing conditions and would not affect water supplies. Further, any water use would comply with Metro's Water Use and Conservation Policy, which specifies that water efficiency and conservation methods be adopted and maintained.

The increase in water use for the MSF would not significantly contribute to the overall projected increase in water use in MWD's and LADWP's service areas compared to their existing uses. MWD and LADWP have adequate supplies to meet future demand, and water supplies are included in their respective 2020 UWMPs for normal, dry, or multiple dry years (MWD 2021; LADWP 2021a). Future water supply demand in the UWMPs is based on SCAG's 2020 RTP/SCS, which accounts for KNE in its project list (SCAG 2020b).

Therefore, the MSF would have a less than significant impact during operation.

3.18.7.3 IMPACT UTL-3: WASTEWATER FACILITIES

Impact UTL-3: Would the project result in a determination by the wastewater treatment provider, which serves or may serve the project, that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

3.18.7.3.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.18.7.3.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE San Vicente–Fairfax Alignment would generate wastewater through the use of temporary worker restrooms at field offices. Wastewater generation rates assume 120 gallons per day for each field office (City of Los Angeles Bureau of Engineering 2019). There would be a field office at each of the nine proposed stations during construction; therefore, the alignment would have a generation rate of approximately 1,080 gallons per day. The Hyperion Treatment Plant operates below capacity and has an average daily treatment volume of 260 MGD. With a dry weather average design treatment capacity of 450 MGD and a wet weather peak hydraulic capacity of 850 MGD, the Hyperion Treatment Plant has adequate capacity to treat the alignment's projected demands. Wastewater generation from the temporary worker restrooms at field offices would be marginal compared to the Hyperion Treatment Plant's existing capacity. The wastewater demand would not result in a determination by the wastewater treatment provider that it has inadequate capacity to serve KNE's projected demand. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.18.7.3.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. The KNE San Vicente–Fairfax Alignment would introduce minimal increases in wastewater treatment needs and would not require the expansion of any existing wastewater facilities. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.18.7.3.2 KNE FAIRFAX ALIGNMENT

3.18.7.3.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE Fairfax Alignment would generate wastewater through the use of temporary worker restrooms at field offices. Wastewater generation rates assume 120 gallons per day for each field office (City of Los Angeles Bureau of Engineering 2019). There would be a field office at each of the seven proposed stations during construction; therefore, the alignment would have a generation rate of approximately 840 gallons per day. The Hyperion Treatment Plant operates below capacity and has an average daily treatment volume of 260 MGD. With a dry weather average design treatment capacity of 450 MGD and a wet weather peak hydraulic capacity of 850 MGD, the Hyperion Treatment Plant has adequate capacity to treat the alignment's projected demands. Wastewater generation from the temporary worker restrooms at field offices would be marginal compared to the Hyperion Treatment Plant's existing capacity. The wastewater demand would not result in a determination by the wastewater treatment provider that it has inadequate capacity to serve KNE's projected demand. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.18.7.3.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. The KNE Fairfax Alignment would introduce minimal increases in wastewater treatment needs and would not require the expansion of any existing wastewater facilities. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.18.7.3.3 KNE LA BREA ALIGNMENT

3.18.7.3.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE La Brea Alignment would generate wastewater through the use of temporary worker restrooms at field offices. Wastewater generation rates assume 120 gallons per day for each field office (City of Los Angeles Bureau of Engineering 2019). There would be a field office at each of the six proposed stations during construction; therefore, the alignment would have a generation rate of approximately 720 gallons per day. The Hyperion Treatment Plant operates below capacity and has an average daily treatment volume of 260 MGD. With a dry weather average design treatment capacity of 450 MGD and a wet weather peak hydraulic capacity of 850 MGD, the Hyperion Treatment Plant has adequate capacity to treat the alignment's projected demands. Wastewater generation from the temporary worker restrooms at field offices would be marginal compared to the Hyperion Treatment Plant's existing capacity. The wastewater demand would not result in a determination by the wastewater treatment provider that it has inadequate capacity to serve KNE's projected demand. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.18.7.3.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. The KNE La Brea Alignment would introduce minimal increases in wastewater treatment needs and would not require the expansion of any existing wastewater facilities. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.18.7.3.4 HOLLYWOOD BOWL DESIGN OPTION

3.18.7.3.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the Hollywood Bowl Design Option would generate wastewater through the use of temporary worker restrooms at field offices. There would be a field office for the proposed Hollywood Bowl Station during construction; therefore, the design option would have a generation rate of approximately 120 gallons per day. The Hyperion Treatment Plant operates below capacity and has an average daily treatment volume of 260 MGD. With a dry weather average design treatment capacity of 450 MGD and a wet weather peak hydraulic capacity of 850 MGD, the Hyperion Treatment Plant has adequate capacity to treat the design option's projected demands. Wastewater generation from the temporary worker restrooms at field offices would be marginal compared to the Hyperion Treatment Plant's existing capacity. The wastewater demand would not result in a determination by the wastewater treatment provider that it has inadequate capacity to serve KNE's

projected demand. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.18.7.3.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. The Hollywood Bowl Design Option would introduce minimal increases in wastewater treatment needs and would not require the expansion of any existing wastewater facilities. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.18.7.3.5 MAINTENANCE AND STORAGE FACILITY

3.18.7.3.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the MSF would generate wastewater through the use of temporary worker restrooms at field offices. The MSF would have a field office during construction and would have a generation rate of approximately 120 gallons per day. The Hyperion Treatment Plant operates below capacity and has an average daily treatment volume of 260 MGD. With a dry weather average design treatment capacity of 450 MGD and a wet weather peak hydraulic capacity of 850 MGD, the Hyperion Treatment Plant has adequate capacity to treat the design option's projected demands. Wastewater generation from the temporary worker restrooms at field offices would be marginal compared to the Hyperion Treatment Plant's existing capacity. The wastewater demand would not result in a determination by the wastewater treatment provider that it has inadequate capacity to serve KNE's projected demand. Therefore, the MSF would have a less than significant impact during construction.

3.18.7.3.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the MSF would produce wastewater related to washing LRVs and use of employee restrooms. The Hyperion Treatment Plant operates below capacity and has an average daily treatment volume of 260 MGD. With a dry weather average design treatment capacity of 450 MGD and a wet weather peak hydraulic capacity of 850 MGD, the Hyperion Treatment Plant has adequate capacity to treat the MSF's projected demands. Wastewater demand would not result in a determination by the wastewater treatment provider that it has inadequate capacity to serve KNE's projected demand. Therefore, the MSF would have a less than significant impact during operation.

3.18.7.4 IMPACT UTL-4: SOLID WASTE GENERATION

Impact UTL-4: Would the project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

3.18.7.4.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.18.7.4.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE San Vicente–Fairfax Alignment would involve the generation and removal of solid waste to accommodate demolition and other construction activities. At the proposed stations where demolition of existing buildings is anticipated, generated waste may include bulky, heavy materials such as concrete, wood, metals, glass, and building components. Demolition of structures containing hazardous materials such as asbestos and lead-based materials require specialized procedures and equipment and appropriately certified personnel (for more information, see Section 3.11, Hazards and Hazardous Materials).

For construction of underground LRT guideway and surface elements, the removal of debris (e.g., soil, asphalt, concrete) is anticipated. This would result in an incremental and temporary increase in solid waste disposal at landfills and other waste disposal facilities. With two TBMs, the KNE San Vicente–Fairfax Alignment would generate the majority of its solid waste from spoils (excavated material from TBM construction activities). The project would comply with the provisions set forth in Section 5.408.3 of the 2022 CALGreen Building code, which requires 100 percent of soils resulting primarily from land clearing to be reused or recycled. Some excavated soil would be used as backfill material on-site or reused, and the remaining excavated soil would be hauled off-site for disposal at any of the area landfills that accept and/or recycle construction and demolition materials or to local landfill site(s) if not suitable for fill or contains contaminated soils. As discussed in Section 3.11, Hazards and Hazardous Materials, transportation of hazardous materials would comply with applicable laws and regulations. The cut-and-cover excavations would also involve construction of temporary structures. After completion of construction, the temporary structures would need to be removed, which would generate solid waste.

Metro, the City of Los Angeles, the City of West Hollywood, and Los Angeles County have construction and demolition waste diversion programs to divert materials generated from construction or demolition projects from landfill disposal to recycling. The Los Angeles County construction and demolition program requires diverting at least 70 percent of construction and demolition waste under the Construction and Demolition Debris Recycling and Reuse Ordinance. Per the City of West Hollywood Municipal Code Section 19.20.060 Green Building, contractors shall divert a minimum of 80 percent of all construction and demolition waste away from landfills in accordance with any standards set by the Director of Public Works. Under the City of Los Angeles' Green New Deal Sustainable City pLAn, the City of Los Angeles targets recycling and reusing 80 percent of construction and demolition waste (City of Los Angeles 2019). While targets have not been adopted by a City of Los Angeles ordinance, Section 5.408 of the 2022 CALGreen Building code enforces at least 65 percent recycling and reuse of the total construction and demolition debris. In 2020, Metro exceeded their targeted 85 percent construction landfill diversion rate with a 98.7 percent diversion rate for construction and demolition waste (Metro 2023). The 2022 CALGreen Building Code Provisions under Section 5.408.1.1. through 5.408.1.3 enforces a 65 percent construction and demolition waste landfill diversion rate requirement or the local requirement, whichever is more stringent. KNE would comply with the 2022 CALGreen Building Code and, therefore, would comply with Metro's Moving Beyond Sustainability Plan, which establishes the most stringent of the diversion rates discussed above and sets forth an 85 percent construction landfill diversion rate (Metro 2020).

The City of Los Angeles and Los Angeles County contract with landfills to process solid waste. Landfills that would serve the KNE San Vicente–Fairfax Alignment are shown in Table 3.18-4 and Table 3.18-5, which indicate the landfills' design capacity can cumulatively serve up to 66,526 tons per day for Los Angeles County and 100,908 tons per day for the City of Los Angeles (CalRecycle 2022). Based on landfill capacity, the solid waste contribution to the landfills that serve the alignment would be much less than the allowed daily capacity.

As described above, construction of the alignment would not generate solid waste in excess of state or local standards, in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals and would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.18.7.4.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE San Vicente–Fairfax Alignment would not include a direct source of solid waste. Indirectly, solid waste would be generated by transit users. Stations would include waste bins and recycle bins, but the disposal of solid waste collected at each station would have no notable potential to affect landfill capacity or impair attainment of solid waste reduction goals.

Assembly Bill (AB) 939 requires a Solid Waste Diversion Program and diversion of at least 50 percent of the solid waste from landfills to recycling facilities. Los Angeles County achieved an estimated landfill diversion rate of 60 percent in 2012 (Los Angeles County 2013). The City of Los Angeles achieved a landfill diversion rate of 76.4 percent at the end of 2011 (City of Los Angeles, University of California Los Angeles 2013). Both the City of Los Angeles and Los Angeles County currently exceed AB 939's 50 percent diversion rate, and KNE would be required to participate in these efforts to minimize waste disposed of in landfills.

The City of Los Angeles and Los Angeles County contract with landfills to process solid waste. Landfills that would serve the KNE San Vicente–Fairfax Alignment are shown in Table 3.18-4 and Table 3.18-5, which indicate the landfills' design capacity can cumulatively serve up to 66,526 tons per day for Los Angeles County and 100,908 tons per day for the City of Los Angeles (CalRecycle 2022). Based on landfill capacity, the solid waste contribution from the KNE San Vicente–Fairfax Alignment to the landfills that serve the alignment would be much less than the allowed daily capacity.

As described above, operation of the alignment would not generate solid waste in excess of state or local standards, in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.18.7.4.2 KNE FAIRFAX ALIGNMENT

3.18.7.4.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE Fairfax Alignment would involve the generation and removal of solid waste to accommodate demolition and other construction activities. At the proposed stations where demolition of existing buildings is anticipated, generated waste may include bulky, heavy materials such as concrete, wood, metals, glass, and building components. Demolition of structures containing hazardous materials such as asbestos and lead-based materials require specialized procedures and equipment and appropriately certified personnel (for more information, see Section 3.11, Hazards and Hazardous Materials).

For construction of underground LRT guideway and surface elements, the removal of debris (e.g., soil, asphalt, concrete) is anticipated. This would result in an incremental and temporary increase in solid waste disposal at landfills and other waste disposal facilities. With two TBMs, the KNE Fairfax Alignment would generate the majority of its solid waste from spoils (excavated material from TBM construction activities). The project would comply with the provisions set forth in Section 5.408.3 of the 2022 CALGreen Building code, which requires 100 percent of soils resulting primarily from land clearing to be reused or recycled. Some excavated soil would be used as backfill material on-site or reused, and the remaining excavated soil would be hauled off-site for disposal at any of the area landfills that accept and/or recycle construction and demolition materials or to local landfill site(s) if not suitable for fill or contains contaminated soils. As discussed in Section 3.11, Hazards and Hazardous Materials, transportation of hazardous materials would comply with applicable laws and regulations. The cut-and-cover excavations would also involve construction of temporary structures. After completion of construction, the temporary structures would need to be removed, which would generate solid waste.

Metro, the City of West Hollywood, the City of Los Angeles, and Los Angeles County have construction and demolition waste diversion programs to divert materials generated from construction or demolition projects from landfill disposal to recycling. The Los Angeles County construction and demolition program requires diverting at least 70 percent of construction and demolition waste under the Construction and Demolition Debris Recycling and Reuse Ordinance. Per the City of West Hollywood Municipal Code Section 19.20.060 Green Building, contractors shall divert a minimum of 80 percent of all construction and demolition waste away from landfills in accordance with any standards set by the Director of Public Works. Under the City of Los Angeles' Green New Deal Sustainable City pLAn, the City of Los Angeles targets recycling and reusing 80 percent of construction and demolition waste (City of Los Angeles 2019). While targets have not been adopted by a City of Los Angeles ordinance, Section 5.408 of the 2022 CALGreen Building code enforces at least 65 percent recycling and reuse of the total construction and demolition debris. In 2020, Metro exceeded their targeted 85 percent construction landfill diversion rate with a 98.7 percent diversion rate for construction and demolition waste (Metro 2023). The 2022 CALGreen Building Code Provisions under Section 5.408.1.1. through 5.408.1.3 enforces a 65 percent construction and demolition waste landfill diversion rate requirement or the local requirement, whichever is more stringent. KNE would comply with the 2022 CALGreen Building Code and, therefore, would comply with Metro's Moving Beyond Sustainability Plan, which establishes the most stringent of

the diversion rates discussed above and sets forth an 85 percent construction landfill diversion rate (Metro 2020).

The City of Los Angeles and Los Angeles County contract with landfills to process solid waste. Landfills that would serve the KNE Fairfax Alignment are shown in Table 3.18-4 and Table 3.18-5, which indicate the landfills' design capacity can cumulatively serve up to 66,526 tons per day for Los Angeles County and 100,908 tons per day for the City of Los Angeles (CalRecycle 2022). Based on landfill capacity, the solid waste contribution to the landfills that serve the alignment would be much less than the allowed daily capacity.

As described above, construction of the alignment would not generate solid waste in excess of state or local standards, in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals and would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.18.7.4.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE Fairfax Alignment would not include a direct source of solid waste. Indirectly, solid waste would be generated by transit users. Stations would include waste bins and recycle bins, but the disposal of solid waste collected at each station would have no notable potential to affect landfill capacity or impair attainment of solid waste reduction goals.

AB 939 requires a Solid Waste Diversion Program and diversion of at least 50 percent of the solid waste from landfills to recycling facilities. Los Angeles County achieved an estimated landfill diversion rate of 60 percent in 2012 (Los Angeles County 2013). The City of Los Angeles achieved a landfill diversion rate of 76.4 percent at the end of 2011 (City of Los Angeles, University of California Los Angeles 2013). Both the City of Los Angeles and Los Angeles County currently exceed AB 939's 50 percent diversion rate, and KNE would be required to participate in these efforts to minimize waste disposed of in landfills.

The City of Los Angeles and Los Angeles County contract with landfills to process solid waste. Landfills that would serve the KNE Fairfax Alignment are shown in Table 3.18-4 and Table 3.18-5, which indicate the landfills' design capacity can cumulatively serve up to 66,526 tons per day for Los Angeles County and 100,908 tons per day for the City of Los Angeles (CalRecycle 2022). Based on landfill capacity, the solid waste contribution from the KNE Fairfax Alignment to the landfills that serve the alignment would be much less than the allowed daily capacity.

As described above, operation of the alignment would not generate solid waste in excess of state or local standards, in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.18.7.4.3 KNE LA BREA ALIGNMENT

3.18.7.4.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE La Brea Alignment would involve the generation and removal of solid waste to accommodate demolition and other construction activities. At the proposed stations where demolition of existing buildings is anticipated, generated waste may include bulky, heavy materials such as concrete, wood, metals, glass, and building components. Demolition of structures containing hazardous materials such as asbestos and lead-based materials require specialized procedures and equipment and appropriately certified personnel (for more information, see Section 3.11, Hazards and Hazardous Materials).

For construction of underground LRT guideway and surface elements, the removal of debris (e.g., soil, asphalt, concrete) is anticipated. This would result in an incremental and temporary increase in solid waste disposal at landfills and other waste disposal facilities. With two TBMs, the KNE La Brea Alignment would generate the majority of its solid waste from spoils (excavated material from TBM construction activities). The project would comply with the provisions set forth in Section 5.408.3 of the 2022 CALGreen Building code, which requires 100 percent of soils resulting primarily from land clearing to be reused or recycled. Some excavated soil would be used as backfill material on-site or reused, and the remaining excavated soil would be hauled off-site for disposal at any of the area landfills that accept and/or recycle construction and demolition materials or to local landfill site(s) if not suitable for fill or contains contaminated soils. As discussed in Section 3.11, Hazards and Hazardous Materials, transportation of hazardous materials would comply with applicable laws and regulations. The cut-and-cover excavations would also involve construction of temporary structures. After completion of construction, the temporary structures would need to be removed, which would generate solid waste.

Metro, the City of Los Angeles, the City of West Hollywood, and Los Angeles County have construction and demolition waste diversion programs to divert materials generated from construction or demolition projects from landfill disposal to recycling. The Los Angeles County construction and demolition program requires diverting at least 70 percent of construction and demolition waste under the Construction and Demolition Debris Recycling and Reuse Ordinance. Per the City of West Hollywood Municipal Code Section 19.20.060 Green Building, contractors shall divert a minimum of 80 percent of all construction and demolition waste away from landfills in accordance with any standards set by the Director of Public Works. Under the City of Los Angeles' Green New Deal Sustainable City pLAn, the City of Los Angeles targets recycling and reusing 80 percent of construction and demolition waste (City of Los Angeles 2019). While targets have not been adopted by a City of Los Angeles ordinance, Section 5.408 of the 2022 CALGreen Building code enforces at least 65 percent recycling and reuse of the total construction and demolition debris. In 2020, Metro exceeded their targeted 85 percent construction landfill diversion rate with a 98.7 percent diversion rate for construction and demolition waste (Metro 2023). The 2022 CALGreen Building Code Provisions under Section 5.408.1.1. through 5.408.1.3 enforces a 65 percent construction and demolition waste landfill diversion rate requirement or the local requirement, whichever is more stringent. KNE would comply with the 2022 CALGreen Building Code and, therefore, would comply with Metro's Moving Beyond Sustainability Plan, which establishes the most stringent of

the diversion rates discussed above and sets forth an 85 percent construction landfill diversion rate (Metro 2020).

The City of Los Angeles and Los Angeles County contract with landfills to process solid waste. Landfills that would serve the KNE La Brea Alignment are shown in Table 3.18-4 and Table 3.18-5, which indicate the landfills' design capacity can cumulatively serve up to 66,526 tons per day for Los Angeles County and 100,908 tons per day for the City of Los Angeles (CalRecycle 2022). Based on landfill capacity, the solid waste contribution to the landfills that serve the alignment would be much less than the allowed daily capacity.

As described above, construction of the alignment would not generate solid waste in excess of state or local standards, in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals and would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.18.7.4.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE La Brea Alignment would not include a direct source of solid waste. Indirectly, solid waste would be generated by transit users. Stations would include waste bins and recycle bins, but the disposal of solid waste collected at each station would have no notable potential to affect landfill capacity or impair attainment of solid waste reduction goals.

AB 939 requires a Solid Waste Diversion Program and diversion of at least 50 percent of the solid waste from landfills to recycling facilities. Los Angeles County achieved an estimated landfill diversion rate of 60 percent in 2012 (Los Angeles County 2013). The City of Los Angeles achieved a landfill diversion rate of 76.4 percent at the end of 2011 (City of Los Angeles, University of California Los Angeles 2013). Both the City of Los Angeles and Los Angeles County currently exceed AB 939's 50 percent diversion rate, and KNE would be required to participate in these efforts to minimize waste disposed of in landfills.

The City of Los Angeles and Los Angeles County contract with landfills to process solid waste. Landfills that would serve the KNE La Brea Alignment are shown in Table 3.18-4 and Table 3.18-5, which indicate the landfills' design capacity can cumulatively serve up to 66,526 tons per day for Los Angeles County and 100,908 tons per day for the City of Los Angeles (CalRecycle 2022). Based on landfill capacity, the solid waste contribution from the KNE La Brea Alignment to the landfills that serve the alignment would be much less than the allowed daily capacity.

As described above, operation of the alignment would not generate solid waste in excess of state or local standards, in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.18.7.4.4 HOLLYWOOD BOWL DESIGN OPTION

3.18.7.4.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the Hollywood Bowl Design Option would involve the generation and removal of solid waste to accommodate demolition and construction activities. For construction of underground guideway and surface elements, the removal of debris (e.g., soil, asphalt, concrete) is anticipated. This would result in an incremental and temporary increase in solid waste disposal at landfills and other waste disposal facilities. The design option would generate a majority of its solid waste from SEM activities. The project would comply with the provisions set forth in Section 5.408.3 of the 2022 CALGreen Building Code, which requires 100 percent of soils resulting primarily from land clearing to be reused or recycled. Some excavated soil would be used as backfill material on-site or reused, and the remaining excavated soil would be hauled off-site for disposal at any of the area's landfills that accept and/or recycle construction and demolition materials or to local landfill site(s) if not suitable for fill or contains contaminated soils. As discussed in Section 3.11, Hazards and Hazardous Materials, transportation of hazardous materials would comply with applicable laws and regulations. The construction of the tunnel and station would also involve temporary structures. After completion of construction, the temporary structures would need to be removed, which would generate solid waste.

Metro and the City of Los Angeles have construction and demolition waste diversion programs to divert materials generated from construction or demolition projects from landfill disposal to recycling. Under the City of Los Angeles' Green New Deal Sustainable City pLAn, the City of Los Angeles targets recycling and reusing 80 percent of construction and demolition waste (City of Los Angeles 2019). While targets have not been adopted by a City of Los Angeles ordinance, Section 4.408 of the 2022 CALGreen Building Code enforces at least 65 percent recycling and reuse of the total construction and demolition debris. In 2020, Metro exceeded their targeted 85 percent construction landfill diversion rate with a 98.7 percent diversion rate for construction and demolition waste (Metro 2023). The 2022 CALGreen Building Code Provisions under Section 5.408.1.1. through 5.408.1.3 enforces a 65 percent construction and demolition waste landfill diversion rate requirement or the local requirements, whichever is more stringent. The project would comply with the 2022 CALGreen Building Code and, therefore, would comply with Metro's Moving Beyond Sustainability Plan, which establishes the most stringent of the diversion rates discussed above and sets forth an 85 percent construction landfill diversion rate (Metro 2020).

The City of Los Angeles and Los Angeles County contract with landfills to process solid waste. Landfills that would serve the design option are shown in Table 3.18-4 and Table 3.18-5, which indicate the landfills' design capacity can cumulatively serve up to 66,526 tons per day for Los Angeles County and 100,908 tons per day for the City of Los Angeles (CalRecycle 2022). Based on landfill capacity, the solid waste contribution to the landfills that serve the design option would be much less than the allowed daily capacity.

As described above, construction of the design option would not generate solid waste in excess of state or local standards, in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals and would comply with federal, state, and local management and reduction

statutes and regulations related to solid waste. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.18.7.4.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the Hollywood Bowl Design Option would not include a direct source of solid waste. Indirectly, solid waste would be generated by transit users. The station would include waste bins and recycle bins, but the disposal of solid waste collected at the station would have no notable potential to affect landfill capacity or impair attainment of solid waste reduction goals.

AB 939 requires a Solid Waste Diversion Program and diversion of at least 50 percent of the solid waste from landfills to recycling facilities. Los Angeles County achieved an estimated landfill diversion rate of 60 percent in 2012 (Los Angeles County 2013). The City of Los Angeles achieved a landfill diversion rate of 76.4 percent at the end of 2011 (City of Los Angeles, University of California Los Angeles 2013). Both the City of Los Angeles and Los Angeles County currently exceed AB 939's 50 percent diversion rate, and KNE would be required to participate in these efforts to minimize waste disposed of in landfills.

The City of Los Angeles and Los Angeles County contract with landfills to process solid waste. Landfills that would serve the Hollywood Bowl Design Option are shown in Table 3.18-4 and Table 3.18-5, which indicate the landfills' design capacity can cumulatively serve up to 66,526 tons per day for Los Angeles County and 100,908 tons per day for the City of Los Angeles (CalRecycle 2022). Based on landfill capacity, the solid waste contribution to the landfills that serve the design option would be much less than the allowed daily capacity.

Based upon the analysis described above, operation of the design option would not generate solid waste in excess of state or local standards, in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.18.7.4.5 MAINTENANCE AND STORAGE FACILITY

3.18.7.4.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the MSF would involve the generation and removal of solid waste to accommodate demolition and other construction activities, including demolition of existing buildings. Generated waste may include bulky, heavy materials such as concrete, wood, metals, glass, and building components. Demolition of structures containing hazardous materials such as asbestos and lead-based materials require specialized procedures and equipment and appropriately certified personnel (for more information, see Section 3.11, Hazards and Hazardous Materials).

For construction of surface elements, the removal of debris (e.g., soil, asphalt, concrete) is anticipated. This would result in an incremental and temporary increase in solid waste disposal at landfills and other waste disposal facilities. Excavation associated with the MSF would also involve construction of temporary structures. After completion of construction, the temporary structures would need to be removed, which would generate solid waste.

Metro, the City of Los Angeles, and Los Angeles County have construction and demolition waste diversion programs to divert materials generated from construction or demolition projects from landfill disposal to recycling. The Los Angeles County construction and demolition program requires diverting at least 70 percent of construction and demolition waste under the Construction and Demolition Debris Recycling and Reuse Ordinance. Under the City of Los Angeles' Green New Deal Sustainable City pLAn, the City of Los Angeles targets recycling and reusing 80 percent of construction and demolition waste (City of Los Angeles 2019). While targets have not been adopted by a City of Los Angeles ordinance, Section 5.408 of the 2022 CALGreen Building code enforces at least 65 percent recycling and reuse of the total construction and demolition debris. In 2020, Metro exceeded their targeted 85 percent construction landfill diversion rate with a 98.7 percent diversion rate for construction and demolition waste (Metro 2023). The 2022 CALGreen Building Code Provisions under Section 5.408.1.1. through 5.408.1.3 enforces a 65 percent construction and demolition waste landfill diversion rate requirement or the local requirement, whichever is more stringent. KNE would comply with the 2022 CALGreen Building Code and, therefore, would comply with Metro's Moving Beyond Sustainability Plan, which establishes the most stringent of the diversion rates discussed above and sets forth an 85 percent construction landfill diversion rate (Metro 2020).

The City of Los Angeles and Los Angeles County contract with landfills to process solid waste. Landfills that would serve the MSF are shown in Table 3.18-4 and Table 3.18-5, which indicate the landfills' design capacity can cumulatively serve up to 66,526 tons per day for Los Angeles County and 100,908 tons per day for the City of Los Angeles (CalRecycle 2022). Based on landfill capacity, the solid waste contribution to the landfills that serve the MSF would be much less than the allowed daily capacity.

As described above, construction of the MSF would not generate solid waste in excess of state or local standards, in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals and would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. Therefore, the MSF would have a less than significant impact during construction.

3.18.7.4.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the MSF would generate small volumes of solid waste, such as product packaging, broken equipment, and site litter, which would not result in a net increase in project-related solid waste generation 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.

AB 939 requires a Solid Waste Diversion Program and diversion of at least 50 percent of the solid waste from landfills to recycling facilities. Los Angeles County achieved an estimated landfill diversion rate of 60 percent in 2012 (Los Angeles County 2013). The City of Los Angeles achieved a landfill diversion rate of 76.4 percent at the end of 2011 (City of Los Angeles, University of California Los Angeles 2013). Both the City of Los Angeles and Los Angeles County currently exceed AB 939's required 50 percent diversion rate, and the MSF would be required to participate in these efforts to minimize waste disposed of in landfills.

The City of Los Angeles and Los Angeles County contract with landfills to process solid waste. Landfills that would serve the MSF are shown in Table 3.18-4 and Table 3.18-5, which indicate the landfills' design capacity can cumulatively serve up to 66,526 tons per day for Los Angeles County and 100,908 tons per day for the City of Los Angeles (CalRecycle 2022). Based on landfill capacity, the solid waste contribution to the landfills that serve the MSF would be much less than the allowed daily capacity.

The disposal of solid waste collected at the MSF would have no notable potential to affect landfill capacity or impair attainment of solid waste reduction goals. Therefore, the MSF would have a less than significant impact during operation.

3.18.7.5 IMPACT UTL-5: SOLID WASTE DISPOSAL REGULATIONS

Impact UTL-5: Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

3.18.7.5.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.18.7.5.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE San Vicente–Fairfax Alignment would be required to comply with all applicable federal, state, and local statutes and regulations pertaining to solid waste disposal. As discussed under Impact UTL-4 above, solid waste would be generated during construction of the alignment; however, Metro requires contractors to comply with the most stringent applicable waste regulations. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.18.7.5.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. AB 939 requires a Solid Waste Diversion Program and diversion of at least 50 percent of the solid waste from landfills to recycling facilities. Los Angeles County achieved an estimated landfill diversion rate of 60 percent in 2012. The City of Los Angeles achieved a landfill diversion rate of 76.4 percent at the end of 2011 (LACDPW 2019; City of Los Angeles, University of California Los Angeles 2013). Both jurisdictions currently exceed the required diversion rate, and the project would be required to participate in these efforts to minimize waste disposed of in landfills. As discussed under Impact UTL-4, small amounts of solid waste would be generated during operation of the alignment. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.18.7.5.2 KNE FAIRFAX ALIGNMENT

3.18.7.5.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE Fairfax Alignment would be required to comply with all applicable federal, state, and local statutes and regulations pertaining to solid waste disposal. As discussed under Impact UTL-4 above, solid waste would be generated during construction of the

alignment; however, Metro requires contractors to comply with the most stringent applicable waste regulations. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.18.7.5.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. AB 939 requires a Solid Waste Diversion Program and diversion of at least 50 percent of the solid waste from landfills to recycling facilities. Los Angeles County achieved an estimated landfill diversion rate of 60 percent in 2012. The City of Los Angeles achieved a landfill diversion rate of 76.4 percent at the end of 2011 (LACDPW 2019; City of Los Angeles, University of California Los Angeles 2013). Both jurisdictions currently exceed the required diversion rate, and the project would be required to participate in these efforts to minimize waste disposed of in landfills. As discussed under Impact UTL-4, small amounts of solid waste would be generated during operation of the alignment. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.18.7.5.3 KNE LA BREA ALIGNMENT

3.18.7.5.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE La Brea Alignment would be required to comply with all applicable federal, state, and local statutes and regulations pertaining to solid waste disposal. As discussed under Impact UTL-4 above, solid waste would be generated during construction of the alignment; however, Metro requires contractors to comply with the most stringent applicable waste regulations. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.18.7.5.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. AB 939 requires a Solid Waste Diversion Program and diversion of at least 50 percent of the solid waste from landfills to recycling facilities. Los Angeles County achieved an estimated landfill diversion rate of 60 percent in 2012. The City of Los Angeles achieved a landfill diversion rate of 76.4 percent at the end of 2011 (LACDPW 2019; City of Los Angeles, University of California Los Angeles 2013). Both jurisdictions currently exceed the required diversion rate, and the project would be required to participate in these efforts to minimize waste disposed of in landfills. As discussed under Impact UTL-4, small amounts of solid waste would be generated during operation of the alignment. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.18.7.5.4 HOLLYWOOD BOWL DESIGN OPTION

3.18.7.5.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the Hollywood Bowl Design Option would be required to comply with all applicable federal, state, and local statutes and regulations pertaining to solid waste disposal. As discussed under Impact UTL-4 above, solid waste would be generated during construction of the design option; however, Metro requires contractors to comply with the most stringent applicable waste regulations. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.18.7.5.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. AB 939 requires a Solid Waste Diversion Program and diversion of at least 50 percent of the solid waste from landfills to recycling facilities. Los Angeles County achieved an estimated landfill diversion rate of 60 percent in 2012. The City of Los Angeles achieved a landfill diversion rate of 76.4 percent at the end of 2011 (LACDPW 2019; City of Los Angeles, University of California Los Angeles 2013). Both jurisdictions currently exceed the required diversion rate, and the project would be required to participate in these efforts to minimize waste disposed of in landfills. As discussed under Impact UTL-4, small amounts of solid waste would be generated during operation of the design option. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.18.7.5.5 MAINTENANCE AND STORAGE FACILITY

3.18.7.5.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the MSF would be required to comply with all applicable federal, state, and local statutes and regulations pertaining to solid waste disposal. As discussed under Impact UTL-4 above, solid waste would be generated during construction of the MSF; however, Metro requires contractors to comply with the most stringent applicable waste regulations. Therefore, the MSF would have a less than significant impact during construction.

3.18.7.5.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. AB 939 requires a Solid Waste Diversion Program and diversion of at least 50 percent of the solid waste from landfills to recycling facilities. Los Angeles County achieved an estimated landfill diversion rate of 60 percent in 2012. The City of Los Angeles achieved a landfill diversion rate of 76.4 percent at the end of 2011. Both jurisdictions currently exceed the required diversion rate, and the project would be required to participate in these efforts to minimize waste disposed of in landfills. As discussed under Impact UTL-4, small amounts of solid waste would be generated during operation of the MSF. Therefore, the MSF would have a less than significant impact during operation.

3.18.7.6 MITIGATION MEASURES

As the impact analysis above demonstrates, construction and operation of any of the KNE alignments and stations, the design option, and the MSF would result in either no impact or a less than significant impact related to utilities and service systems. Therefore, no mitigation is required under CEQA.

3.18.7.7 SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

Table 3.18-6 summarizes the utilities and service systems impact significance conclusions and applicable mitigation measures. As indicated above, there are no significant utilities and service systems impacts that would require mitigation.

TABLE 3.18-6. KNE SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

IMPACT		IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES				
		KNE SAN VICENTE–FAIRFAX ALIGNMENT	KNE FAIRFAX ALIGNMENT	KNE LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MAINTENANCE AND STORAGE FACILITY
Impact UTL-1: Utility Relocation or Construction of New or Expanded Facilities	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
Impact UTL-2: Water Supplies	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
Impact UTL-3: Wastewater Facilities	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
Impact UTL-4: Solid Waste Generation	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS

IMPACT		IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES				
		KNE SAN VICENTE–FAIRFAX ALIGNMENT	KNE FAIRFAX ALIGNMENT	KNE LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MAINTENANCE AND STORAGE FACILITY
Impact UTL-5: Solid Waste Disposal Regulations	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS

Source: Connect Los Angeles Partners 2024
LTS = less than significant

3.19 CUMULATIVE IMPACTS

3.19.1 INTRODUCTION

Under the California Environmental Quality Act (CEQA) Guidelines, cumulative impacts are defined as two or more individual impacts that, when considered together, are considerable or would compound and increase other environmental impacts (Section 15355). These cumulative impacts must be discussed in an environmental impact report when the project's incremental effect is "cumulatively considerable" (Section 15130). "Cumulatively considerable" is defined as when the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects (Section 15065(a)(3)).

CEQA Guidelines Section 15130(b)(1) includes two methodology approaches for assessing cumulative impacts. One approach is a "list of past, present, and probable future projects producing related or cumulative impacts" (Section 15130(b)(1)(A)). The other approach is a "summary of projections contained in an adopted local, regional, or statewide plan, or related document, that describes or evaluates conditions contributing to the cumulative effect" (15030 (b)(1)(B)). For the purposes of this analysis, the latter approach is used due to the long project implementation time. The forecasted project completion timeframe is in the late-2040s based on Metro Measure M funding. Due to the long-term nature of the project's implementation, a list of land use and transportation projects is insufficient for the cumulative analysis since the currently known projects would be completed and operational by the project's forecasted completion. In addition, it is highly likely additional projects will be proposed and constructed between now and project implementation; therefore, any project list developed would be incomplete.

The Southern California Association of Governments (SCAG) 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) is the adopted long-range forecast for population, households, and employment within the six-county Southern California region, which includes all project elements. The project is included in the SCAG 2020-2045 RTP/SCS, as well as Metro's 2020 Long Range Transportation Plan. The RTP/SCS was adopted in 2020 and proposes land use and transportation strategies to improve mobility options and achieve a more sustainable growth pattern (SCAG 2020). SCAG worked in close coordination with decision-makers and the public across multiple jurisdictions throughout the SCAG region to create the plan. The population, household, and employment growth projections from this plan are used to assess regional growth and its cumulative impact within the vicinity of the project.

For the cumulative analysis, unless identified otherwise for a specific resource, the resource study area (RSA) is defined as a 0.5-mile radius from the stations, the Hollywood Bowl Design Option, and the maintenance and storage facility (MSF). The project RSAs for each resource are discussed in the relevant resource sections in Chapter 3. For context, Table 3.19-1 shows the projected net growth in population, households, and employment between 2020 and 2045 for Los Angeles County, the City of Los Angeles, and the City of West Hollywood. Table 3.19-2 shows the projected net growth in population, households, and employment between 2019 and 2045 in the 0.5-mile cumulative RSA for all stations, the design option, and the MSF. The data in the table were calculated by merging the SCAG 2020-2045 RTP/SCS

TABLE 3.19-1. PROJECTED PERCENT GROWTH FOR LOS ANGELES COUNTY, CITY OF LOS ANGELES, AND CITY OF WEST HOLLYWOOD

COUNTY/CITY	POPULATION % GROWTH (2021 TO 2045)	HOUSEHOLD % GROWTH (2021 TO 2045)	EMPLOYMENT % GROWTH (2019 TO 2045)
Los Angeles County	16.5	23.2	11.5
City of Los Angeles	22.1	29.3	13.3
City of West Hollywood	19.9	31.5	52.7

Source: U.S. Census Bureau 2021; SCAG 2020

TABLE 3.19-2. SCAG POPULATION, HOUSING, AND EMPLOYMENT PROJECTED PERCENT GROWTH FOR 0.5-MILE BUFFER AREAS

STATION BUFFER AREA	POPULATION % GROWTH (2021 TO 2045)	HOUSEHOLD % GROWTH (2021 TO 2045)	EMPLOYMENT % GROWTH (2019 TO 2045)
STATIONS			
Crenshaw/Adams	60.5	63.1	19.6
Midtown Crossing	49.2	46.1	21.1
Wilshire/Fairfax	62.1	68.1	6.2
Fairfax/3rd	42.1	52.4	6.5
La Cienega/Beverly	54.5	55.6	6.1
San Vicente/Santa Monica	23.8	38.2	46.2
Fairfax/Santa Monica	20.5	29.3	49.5
La Brea/Santa Monica	15.1	15.0	42.6
Hollywood/Highland	37.9	26.4	3.0
Wilshire/La Brea	53.3	48.6	9.4
La Brea/Beverly	34.8	36.4	14.5
DESIGN OPTION			
Hollywood Bowl Design Option	65.0	52.5	17.4
MAINTENANCE AND STORAGE FACILITY			
MSF	14.0	15.9	9.9

Source: U.S. Census Bureau 2021; SCAG 2020
Note: The growth projection percentages for the La Brea/Santa Monica Station are averages of the growth projection percentages for the two station configurations for the San Vicente-Fairfax and Fairfax Alignments and the La Brea Alignment.
MSF = maintenance and storage facility

growth projections with the SCAG Tier 2 Transportation Analysis Zone boundaries[1] for Los Angeles County, then assessed for a 0.5-mile radius around the stations, the design option, and the MSF. Data shows projected growth from transportation and development projects and associated infrastructure, that when combined with the project's construction and operation, could result in cumulative effects.

A cumulative analysis, including identification of any applicable impacts, is presented for each resource topic evaluated in Chapter 3 of this Draft Environmental Impact Report.

3.19.2 AESTHETICS

3.19.2.1 ALIGNMENTS AND STATIONS

Less than Significant Impact. The existing visual character in the areas of the alignments and stations would not substantially change, and the quality of views in terms of visibility beyond the alignments and stations would not be substantially obstructed. The alignments would be primarily underground, and the above-surface features would be absorbed into the broader views that already include urbanized, built-out street views. The stations would not obstruct or substantially obstruct views of mountains and hillsides to the north and east because these views are already blocked by development. The alignments and station would be consistent with local planning documents and would comply with local ordinances and regulations.

The alignments and stations would not produce a substantial amount of light and glare, and they would comply with Metro and other local lighting ordinances during construction and operation. New development, redevelopment, or other infrastructure related to growth projections in the SCAG 2020-2045 RTP/SCS would also be required to be consistent with local planning documents and policies and to comply with local ordinances and regulations, including those related to visual character and quality, scenic quality, and public views. Therefore, the incremental effects of the alignments and stations, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact related to aesthetics would be less than significant.

3.19.2.2 HOLLYWOOD BOWL DESIGN OPTION

Less than Significant Impact. The existing visual character in the area of the Hollywood Bowl Design Option would not substantially change, and the quality of views in terms of visibility beyond the design option, including the Hollywood Bowl Station, would not be substantially obstructed. The design option would be primarily underground, and the above-surface features would be absorbed into the broader views that already include urbanized views. The station would not obstruct or substantially obstruct existing views. The design option would be consistent with local planning documents and would comply with local ordinances and regulations.

[1]The SCAG Tier 2 Transportation Analysis Zones (TAZs) were developed based on U.S. Census tract boundaries and provide the geographical areas to conduct highly detailed traffic analysis and predictions with SCAG's transportation model. The TAZs are generally sized and shaped to provide a relatively homogenous type of land use and activity.

The design option would not produce a substantial amount of light and glare, and it would comply with Metro and other local lighting ordinances during construction and operation. New development, redevelopment, or other infrastructure related to growth projections in the SCAG 2020-2045 RTP/SCS would also be required to be consistent with local planning documents and policies and to comply with local ordinances and regulations, including those related to visual character and quality, scenic quality, and public views. Therefore, the incremental effects of the Hollywood Bowl Design Option, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact related to aesthetics would be less than significant.

3.19.2.3 MAINTENANCE AND STORAGE FACILITY

Less than Significant Impact. The existing visual character in the area of the MSF would not substantially change, and the quality of views in terms of visibility beyond the MSF would not be substantially obstructed. The MSF would be consistent with local planning documents and would comply with local ordinances and regulations. Any light and glare associated with the MSF would be a negligible addition to existing light and glare because the adjacent areas are industrial, with similar light intensity and conditions, and it would comply with Metro and other local lighting ordinances during construction and operation. New development, redevelopment, or other infrastructure related to growth projections in the SCAG 2020-2045 RTP/SCS would also be required to be consistent with local planning documents and policies and to comply with local ordinances and regulations, including those related to visual character and quality, scenic quality, and public views. Therefore, the incremental effects of the MSF, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact related to aesthetics would be less than significant.

3.19.3 AIR QUALITY

The South Coast Air Quality Management District (SCAQMD) has developed guidance regarding assessment of cumulative air quality impacts. The SCAQMD's August 2003 White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution asserts that:

> "projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant" (SCAQMD 2003).

Attainment of the air quality standards is accomplished at the regional level, and SCAQMD guidance indicates that projects with mass daily emissions below the SCAQMD screening thresholds would not generate sufficient air pollution to render potential cumulative impacts as significant. SCAQMD's air quality significance thresholds acknowledge regional sources already contributing to nonattainment and other current and future individual projects. The air quality cumulative impacts analysis relies on SCAQMD guidance and significance thresholds to determine whether cumulative impacts would be significant in the region, including the 0.5-mile cumulative analysis RSA described above.

3.19.3.1 ALIGNMENTS AND STATIONS

Less than Significant Impact. Construction of the alignments and stations would generate emissions of air pollutants through the use of heavy-duty off-road equipment and on-road vehicles. In addition to exhaust fumes, off-road equipment would produce fugitive emissions, including dust during ground disturbance and material movement. On-road vehicles would produce fugitive re-entrained road dust. As described above, SCAQMD project-specific and cumulative significance thresholds are the same, and SCAQMD guidance indicates that projects that do not exceed the significance thresholds would not generate sufficient air pollution to render potential cumulative impacts as significant (SCAQMD 2003). Construction of the alignments and stations would not generate mass daily emissions in excess of any regional-scale SCAQMD threshold for individual projects under CEQA, nor would it generate localized mass daily emissions in excess of the SCAQMD Localized Significance Thresholds, as discussed under Impact AQ-2 and Impact AQ-3 in Section 3.3 of Chapter 3.

The alignments and stations would not contribute to an exacerbation of air quality violations or emit cumulatively considerable quantities of pollutants for which the South Coast Air Basin is currently designated nonattainment, and they would not expose sensitive receptors to substantial localized pollutant concentrations. Therefore, construction of the alignments and stations would result in a less than significant cumulative impact.

Following completion of construction activities, long-term operation of the alignments and stations would not introduce a new substantial stationary, area, or mobile source of air pollutant emissions into the South Coast Air Basin. The primary effect of operation of the alignments and stations on regional air quality would be the reduction of on-road vehicle miles traveled (VMT) resulting from increased transit ridership. Operation of the alignments and stations would reduce overall emissions of air pollutants within the South Coast Air Basin through the reduction of passenger vehicle trips. Additionally, the K Line Northern Extension (KNE) project, including the alignments and stations, is included in the conforming SCAG 2020-2045 RTP/SCS. Therefore, the incremental effects of the alignments and stations, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.3.2 HOLLYWOOD BOWL DESIGN OPTION

Less than Significant Impact. Construction of the Hollywood Bowl Design Option would generate emissions of air pollutants through the use of heavy-duty off-road equipment and on-road vehicles. In addition to exhaust fumes, off-road equipment would produce fugitive emissions, including dust during ground disturbance and material movement. On-road vehicles would produce fugitive re-entrained road dust. As described above, SCAQMD project-specific and cumulative significance thresholds are the same, and SCAQMD guidance indicates that projects that do not exceed the significance thresholds would not generate sufficient air pollution to render potential cumulative impacts as significant (SCAQMD 2003). Construction of the design option, including the Hollywood Bowl Station, would not generate mass daily emissions in excess of any regional-scale SCAQMD threshold for individual projects under CEQA, nor would it generate localized mass daily emissions in excess of the SCAQMD Localized Significance Thresholds, as discussed under Impact AQ-2 and Impact AQ-3 in Section 3.3 of Chapter 3.

The design option would not contribute to an exacerbation of air quality violations or emit cumulatively considerable quantities of pollutants for which the South Coast Air Basin is currently designated nonattainment, and it would not expose sensitive receptors to substantial localized pollutant concentrations. Therefore, construction of the design option would result in a less than significant cumulative impact.

Following completion of construction activities, long-term operation of the design option would not introduce a new substantial stationary, area, or mobile source of air pollutant emissions into the South Coast Air Basin. Implementation of the design option would not appreciably increase or decrease ridership of the light rail system, nor would it be expected to appreciably increase or decrease VMT in the RSA relative to the alignments and stations; as a result, there was no change to regional vehicle traffic emissions estimates as a result of the design option. Additionally, KNE, including the design option, is included in the conforming SCAG 2020-2045 RTP/SCS. Therefore, the incremental effects of the Hollywood Bowl Design Option, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.3.3 MAINTENANCE AND STORAGE FACILITY

Less than Significant Impact. Construction of the MSF would generate emissions of air pollutants through the use of heavy-duty off-road equipment and on-road vehicles. In addition to exhaust fumes, off-road equipment would produce fugitive emissions, including dust during ground disturbance and material movement. On-road vehicles would produce fugitive re-entrained road dust. As described above, SCAQMD project-specific and cumulative significance thresholds are the same, and SCAQMD guidance indicates that projects that do not exceed the significance thresholds would not generate sufficient air pollution to render potential cumulative impacts as significant (SCAQMD 2003). Construction of the MSF would not generate mass daily emissions in excess of any regional-scale SCAQMD threshold for individual projects under CEQA, nor would it generate localized mass daily emissions in excess of the SCAQMD Localized Significance Thresholds, as discussed under Impact AQ-2 and Impact AQ-3 in Section 3.3 of Chapter 3.

The MSF would not contribute to an exacerbation of air quality violations or emit cumulatively considerable quantities of pollutants for which the South Coast Air Basin is currently designated nonattainment, and it would not expose sensitive receptors to substantial localized pollutant concentrations. Therefore, construction of the MSF would result in a less than significant cumulative impact.

Operation of an MSF is essential in maintaining a reliable light rail system. The MSF would generate emissions of air pollutants through the use of equipment, use of natural gas for heating and cooling, use of architectural coatings, and use of consumer products. Emissions from operation of the MSF would be below the applicable regional and localized SCAQMD thresholds. Therefore, the incremental effects of the MSF, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.4 BIOLOGICAL RESOURCES

There is an existing cumulative impact in the RSA related to biological resources. The cumulative setting for birds protected under the Migratory Birds Treaty Act is considered to be nesting and foraging habitat, and it includes trees within the RSA.

3.19.4.1 ALIGNMENTS AND STATIONS

Less than Significant Impact. Construction and operation of the alignments and stations could result in significant impacts on migratory nesting birds and protected native and/or ornamental trees. Existing and continuing development contributes to cumulative impacts on migratory nesting bird species by altering nesting and foraging habitat, including trees, within the RSA. Nesting and roosting substrate removal due to current and future development in the vicinity of the project is the biggest threat to bird species (U.S. Fish and Wildlife Service 2023). Cumulative impacts, such as removal of protected trees protected under local ordinances and laws, have the potential to occur within the RSA. In addition, removal and/or trimming of existing trees resulting from existing and continuing development contributes to cumulative impacts on tree communities within the region. The project, combined with projected growth included in adopted local, regional, or statewide plans, or related documents, could contribute to this existing cumulative impact.

However, as discussed in Section 3.4 of Chapter 3, project-specific mitigation measure MM BIO-1 would mitigate significant impacts to migratory nesting birds during construction and operational activities by ensuring compliance with the Migratory Bird Treaty Act and the California Fish and Game Code (Sections 2126, 3503, 3513, and 3800). Project-specific mitigation measure MM BIO-2 would mitigate significant impacts on locally protected native and/or ornamental trees during construction activities by ensuring the protection of native and ornamental protected trees. There would be little to no tree and vegetation removal expected during operational activities. With implementation of these mitigation measures, construction and operational activities associated with the alignments and stations would not contribute to the existing cumulative impact in a meaningful way. Therefore, the incremental effects of the alignments and stations, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.4.2 HOLLYWOOD BOWL DESIGN OPTION

Less than Significant Impact. Construction and operation of the Hollywood Bowl Design Option could result in significant impacts on migratory nesting birds and protected native and/or ornamental trees. Existing and continuing development contributes to cumulative impacts on migratory nesting bird species by altering nesting and foraging habitat, including trees, within the RSA. Nesting and roosting substrate removal due to current and future development in the vicinity of the project is the biggest threat to bird species (U.S. Fish and Wildlife Service 2023). Cumulative impacts, such as removal of protected trees protected under local ordinances and laws, have the potential to occur within the RSA. In addition, removal and/or trimming of existing trees resulting from existing and continuing development contributes to cumulative impacts on tree communities within the region. The project, combined with

projected growth included in adopted local, regional, or statewide plans, or related documents, could contribute to this existing cumulative impact.

However, as discussed in Section 3.4 of Chapter 3, project-specific mitigation measure MM BIO-1 would mitigate significant impacts to migratory nesting birds during construction and operational activities by ensuring compliance with the Migratory Bird Treaty Act and the California Fish and Game Code (Sections 2126, 3503, 3513, and 3800). Project-specific mitigation measure MM BIO-2 would mitigate significant impacts on locally protected native and/or ornamental trees during construction activities by ensuring the protection of native and ornamental protected trees. There would be little to no tree and vegetation removal expected during operational activities. With implementation of these mitigation measures, construction and operational activities associated with the design option would not contribute to the existing cumulative impact in a meaningful way. Therefore, the incremental effects of the Hollywood Bowl Design Option, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.4.3 MAINTENANCE AND STORAGE FACILITY

Less than Significant Impact. Construction and operation of the MSF could result in significant impacts on migratory nesting birds and protected native and/or ornamental trees. Existing and continuing development contributes to cumulative impacts on migratory nesting bird species by altering nesting and foraging habitat, including trees, within the RSA. Nesting and roosting substrate removal due to current and future development in the vicinity of the project is the biggest threat to bird species (U.S. Fish and Wildlife Service 2023). Cumulative impacts, such as removal of protected trees protected under local ordinances and laws, have the potential to occur within the RSA. In addition, removal and/or trimming of existing trees resulting from existing and continuing development contributes to cumulative impacts on tree communities within the region. The project, combined with projected growth included in adopted local, regional, or statewide plans, or related documents, could contribute to this existing cumulative impact.

However, as discussed in Section 3.4 of Chapter 3, project-specific mitigation measure MM BIO-1 would mitigate significant impacts to migratory nesting birds during construction and operational activities by ensuring compliance with the Migratory Bird Treaty Act and the California Fish and Game Code (Sections 2126, 3503, 3513, and 3800). Project-specific mitigation measure MM BIO-2 would mitigate significant impacts on locally protected native and/or ornamental trees during construction activities by ensuring the protection of native and ornamental protected trees. There would be little to no tree and vegetation removal expected during operational activities. With implementation of these mitigation measures, construction and operational activities associated with the MSF would not contribute to the existing cumulative impact in a meaningful way. Therefore, the incremental effects of the MSF, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.5 COMMUNITIES, POPULATION, AND HOUSING

3.19.5.1 ALIGNMENTS AND STATIONS

Less than Significant Impact. Any growth associated with construction and operation of the alignments and stations in the communities and neighborhoods within the station RSAs would be in highly urbanized areas. The alignments and stations are anticipated to enhance circulation and connectivity in the region and improve connections with transit stations and other pedestrian and bike facilities. The projections in the SCAG 2020-2045 RTP/SCS also reflect communities and neighborhoods located within the station RSAs that would accommodate projected population, household, and employment growth. Changes in demographics associated with new development opportunities would be consistent with the SCAG 2020-2045 RTP/SCS growth projections because they are based on the general plan land use designations of the Cities of Los Angeles and West Hollywood.

The alignments and stations would not include new or temporary housing or businesses that would directly result in population growth. The alignments and stations are intended to increase the overall accessibility and mobility of persons within the station RSAs and would not directly result in population growth in surrounding communities. In addition, the alignments and stations would not require acquisition of residential parcels and would not displace existing people or housing, necessitating the construction of replacement housing elsewhere. Therefore, the incremental effects of the alignments and stations, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.5.2 HOLLYWOOD BOWL DESIGN OPTION

Less than Significant Impact. Any growth associated with construction and operation of the Hollywood Bowl Design Option in the communities and neighborhoods within the station RSA would be in highly urbanized areas. The design option is anticipated to enhance circulation and connectivity in the region and improve connections with transit stations and other pedestrian and bike facilities. The projections in the SCAG 2020-2045 RTP/SCS also reflect communities and neighborhoods located within the station RSA that would accommodate projected population, household, and employment growth. Changes in demographics associated with new development opportunities would be consistent with the SCAG 2020-2045 RTP/SCS growth projections because they are based on the general plan land use designations of the City of Los Angeles.

The design option would not include new or temporary housing or businesses that would directly result in population growth. The design option is intended to increase the overall accessibility and mobility of persons within the station RSA and would not directly result in population growth in surrounding communities. In addition, the design option would not require acquisition of residential parcels and would not displace existing people or housing, necessitating the construction of replacement housing elsewhere. Therefore, the incremental effects of the Hollywood Bowl Design Option, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.5.3 MAINTENANCE AND STORAGE FACILITY

Less than Significant Impact. Any growth associated with construction and operation of the MSF in the communities and neighborhoods within the RSA would be in highly urbanized areas. The projections in the SCAG 2020-2045 RTP/SCS also reflect communities and neighborhoods located within the RSA that would accommodate projected population, household, and employment growth. Changes in demographics associated with new development opportunities would be consistent with the SCAG 2020-2045 RTP/SCS growth projections because they are based on the general plan land use designations of the City of Los Angeles.

The MSF would not include new or temporary housing or businesses that would directly result in population growth. The MSF would not directly result in population growth in surrounding communities. In addition, the MSF would not require acquisition of residential parcels and would not displace existing people or housing, necessitating the construction of replacement housing elsewhere. Therefore, the incremental effects of the MSF, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.6 CULTURAL AND PALEONTOLOGICAL RESOURCES

3.19.6.1 CULTURAL RESOURCES

The cumulative RSAs for archaeological and built environment cumulative analysis is the same as the project RSA described in Section 3.6 of Chapter 3, and it includes areas where cultural resources are protected by federal, state, and local regulations. The built environment RSA is defined as the area necessary to construct, operate, and maintain the alignments and design option, and includes all public right-of-way and private property acquisition and construction areas, and all parcels adjacent to permanent site improvements and facilities. The archaeological RSA encompasses areas where temporary or permanent ground disturbance may occur and includes all public right-of-way, private property acquisition, and construction areas.

3.19.6.1.1 ALIGNMENTS AND STATIONS

3.19.6.1.1.1 HISTORICAL RESOURCES

Significant and Unavoidable Impact. Construction of the alignments and stations would require the acquisition and demolition of historical resources, which would be a significant impact. Development of the alignments and stations in combination with projected future development in adjacent areas would increase the potential for impacts to historical resources and could contribute to the loss of such resources in the region. The potential that other development, consistent with local plans, would affect historical resources during construction is determined by a variety of factors, including the type of development that is proposed. Therefore, the incremental effects of the KNE alignments and stations, in combination with projected growth, would be cumulatively considerable, and the cumulative impact would be significant. Implementation of project-specific mitigation measures pertaining to historical resources that would be demolished, as discussed in Section 3.6 of Chapter 3 (MM CUL-1 through MM

CUL-5), would not mitigate cumulative impacts to a less than significant level. Therefore, construction of the KNE alignments and stations would result in a cumulatively significant and unavoidable impact.

3.19.6.1.1.2 ARCHAEOLOGICAL RESOURCES

Less than Significant Impact. The archaeological sensitivity in the RSA ranges from low to moderate, which indicates construction activities associated with the alignments and stations have a low to moderate potential to encounter previously unidentified archaeological resources below the ground surface. In addition, the region contains Native American cultural resources. It is possible these resources could be unearthed during ground-disturbing activities, and construction of the alignments and stations could cause a substantial adverse change in the significance of a unique archaeological resource, which would be a significant impact. The KNE alignments and stations in combination with projected future development located in adjacent areas would increase the potential for impacts to archaeological resources and could contribute to the loss of such resources in the region. The potential that other development, consistent with local plans, would affect archaeological resources during construction is determined by a variety of factors, including the type of development that is proposed. Therefore, the incremental effects of the KNE alignments and stations, in combination with projected growth, would be cumulatively considerable. However, with implementation of project-specific mitigation measures discussed in Section 3.6 of Chapter 3 (MM CUL-5 through MM CUL-8), the cumulative impact would be less than significant.

3.19.6.1.1.3 DISTURBANCE OF HUMAN REMAINS

Less than Significant Impact. Unknown human burials may exist within the RSA, and it is possible these burials could be encountered during excavation activities associated with construction of the alignments and stations. Therefore, the alignments and stations have the potential to cause a significant impact related to human remains. The alignments and stations in combination with projected future development located in adjacent areas would increase the potential for impacts to human remains and could contribute to the loss of such resources in the region. The potential that other development, consistent with local plans, would affect human remains during construction is determined by a variety of factors, including the type of development that is proposed. Therefore, the incremental effects of the alignments and stations, in combination with projected growth, would be cumulatively considerable. However, with implementation of the project-specific mitigation measures discussed in Section 3.6 of Chapter 3 (MM CUL-5 and MM CUL-9), the cumulative impact would be less than significant.

3.19.6.1.2 HOLLYWOOD BOWL DESIGN OPTION

3.19.6.1.2.1 HISTORICAL RESOURCES

Less than Significant Impact. The archaeological sensitivity in the Hollywood Bowl Design Option RSA ranges from low to moderate, which indicates construction activities associated with the design option have a low to moderate potential to encounter previously unidentified archaeological resources below the ground surface. In addition, the region contains Native American cultural resources. It is possible these resources could be unearthed during ground-disturbing activities, causing a substantial adverse

change in the significance of a unique archaeological resource, which would be a significant impact. Development of the design option in combination with projected future development in adjacent areas would increase the potential for impacts to historical resources and could contribute to the loss of such resources in the region. The potential that other development, consistent with local plans, would affect historical resources during construction is determined by a variety of factors, including the type of development that is proposed. Therefore, the incremental effects of the Hollywood Bowl Design Option, in combination with projected growth, would be cumulatively considerable, and the cumulative impact would be significant. However, with implementation of project-specific mitigation measures pertaining to historical resources discussed in Section 3.6 of Chapter 3 (MM CUL-1, MM CUL-2, and MM CUL-5) the cumulative impact would be less than significant.

3.19.6.1.2.2 ARCHAEOLOGICAL RESOURCES

Less than Significant Impact. The archaeological sensitivity in the Hollywood Bowl Design Option RSA ranges from low to moderate, which indicates construction activities associated with the design option have a low to moderate potential to encounter previously unidentified archaeological resources below the ground surface. In addition, the region contains Native American cultural resources. It is possible these resources could be unearthed during ground-disturbing activities, and construction of the design option could cause a substantial adverse change in the significance of a unique archaeological resource, which would be a significant impact. The design option in combination with projected future development located in adjacent areas would increase the potential for impacts to archaeological resources and could contribute to the loss of such resources in the region. The potential that other development, consistent with local plans, would affect archaeological resources during construction is determined by a variety of factors, including the type of development that is proposed. Therefore, the incremental effects of the Hollywood Bowl Design Option, in combination with projected growth, would be cumulatively considerable. However, with implementation of project-specific mitigation measures discussed in Section 3.6 of Chapter 3 (MM CUL-5 through MM CUL-8), the cumulative impact would be less than significant.

3.19.6.1.2.3 DISTURBANCE OF HUMAN REMAINS

Less than Significant Impact. Unknown human burials may exist within the Hollywood Bowl Design Option RSA, and it is possible these burials could be encountered during excavation activities associated with construction. Therefore, the design option has the potential to cause a significant impact related to human remains. The design option in combination with projected future development located in adjacent areas would increase the potential for impacts to human remains and could contribute to the loss of such resources in the region. The potential that other development, consistent with local plans, would affect human remains during construction is determined by a variety of factors, including the type of development that is proposed. Therefore, the incremental effects of the design option, in combination with projected growth, would be cumulatively considerable. However, with implementation of the project-specific mitigation measures discussed in Section 3.6 of Chapter 3 (MM CUL-5 and MM CUL-9), the cumulative impact would be less than significant.

3.19.6.1.3 MAINTENANCE AND STORAGE FACILITY

3.19.6.1.3.1 HISTORICAL RESOURCES

No Impact. No built environment resources are located in the RSA for the MSF that meet the NRHP/CRHR criteria for eligibility and that are considered historical resources for the purposes of CEQA. Therefore, the MSF would not have an incremental effect in combination with projected growth, and there would be no cumulative impact.

3.19.6.1.3.2 ARCHAEOLOGICAL RESOURCES

Less than Significant Impact. Because the MSF Archaeological RSA is almost entirely developed, the minimal and/or shallow construction work that would be required would be unlikely to encounter intact unique archaeological resources. Construction of the MSF has a low potential to cause a substantial adverse change in the significance of a unique archaeological resource. Therefore, the incremental effects of the MSF, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.6.1.3.3 DISTURBANCE OF HUMAN REMAINS

Less than Significant Impact. Unknown human burials may exist within the MSF RSA, and it is possible these burials could be encountered during excavation activities associated with construction of the MSF. Therefore, the MSF has the potential to cause a significant impact related to human remains. The MSF in combination with projected future development located in adjacent areas would increase the potential for impacts to human remains and could contribute to the loss of such resources in the region. The potential that other development, consistent with local plans, would affect human remains during construction is determined by a variety of factors, including the type of development that is proposed. Therefore, the incremental effects of the MSF, in combination with projected growth, would be cumulatively considerable. However, with implementation of the project-specific mitigation measures discussed in Section 3.6 of Chapter 3 (MM CUL-5 and MM CUL-9), the cumulative impact would be less than significant.

3.19.6.2 PALEONTOLOGICAL RESOURCES

The cumulative RSA for the paleontological cumulative analysis is the same as the project RSA described in Section 3.6 of Chapter 3. It encompasses areas where temporary or permanent ground disturbance may occur and includes all public right-of-way, private property acquisition, and construction areas for the alignments and stations, the design option, and the MSF where paleontological resources are protected by state and local regulations.

3.19.6.2.1 ALIGNMENTS AND STATIONS

Significant and Unavoidable Impact. Part of the RSA is in an area of high paleontological potential. The RSA contains a Natural History Museum of Los Angeles County vertebrate fossil locality, as well as many other paleontological localities. Therefore, construction of the alignments and stations could directly or indirectly

destroy a unique paleontological resource, site, or unique geologic feature, resulting in a significant impact. Development of the alignments and stations in combination with projected future development in adjacent areas would increase the potential for impacts to paleontological resources and could contribute to the loss of such resources in the region. The potential that other development, consistent with local plans, would affect paleontological resources during construction is determined by a variety of factors, including the type of development that is proposed. Therefore, the incremental effects of the alignments and stations, in combination with projected growth, would be cumulatively considerable, and the cumulative impact would be significant. Implementation of project-specific mitigation measures pertaining to paleontological resources, as discussed in Section 3.6 of Chapter 3 (MM PAL-1, MM PAL-2, and MM PAL-3), would reduce impacts associated with construction of the stations to less than significant levels. However, unlike underground station construction, tunnel boring machines (TBMs) would be used during construction of the tunnels. Because projects cannot implement paleontological resources monitoring in areas where TBMs are used, impacts to paleontological resources resulting from TBM operation would not be mitigated to a less than significant level. Therefore, construction of the alignments and stations would result in a cumulatively significant and unavoidable impact.

3.19.6.2.2 HOLLYWOOD BOWL DESIGN OPTION

Significant and Unavoidable Impact. The Hollywood Bowl Design Option RSA is in an area of high paleontological potential. Therefore, construction of the design option could directly or indirectly destroy a unique paleontological resource, site, or unique geologic feature, resulting in a significant impact. Development of the design option in combination with projected future development in adjacent areas would increase the potential for impacts to paleontological resources and could contribute to the loss of such resources in the region. The potential that other development, consistent with local plans, would affect paleontological resources during construction is determined by a variety of factors, including the type of development that is proposed. Therefore, the incremental effects of the design option, in combination with projected growth, would be cumulatively considerable, and the cumulative impact would be significant. Implementation of project-specific mitigation measures pertaining to paleontological resources, as discussed in Section 3.6 of Chapter 3 (MM PAL-1, MM PAL-2, and MM PAL-3), would reduce impacts associated with construction of the design option to less than significant levels. Unlike the underground stations for the alignments, which would use cut-and-cover construction, the sequential excavation method (SEM) would be used during construction of the design option tunnels and the Hollywood Bowl Station. Because projects cannot implement paleontological resources monitoring in areas where SEM is used (as with TBM), impacts to paleontological resources resulting from SEM excavation would not be mitigated to a less than significant level. Therefore, construction of the Hollywood Bowl Design Option would result in a cumulatively significant and unavoidable impact.

3.19.6.2.3 MAINTENANCE AND STORAGE FACILITY

Less than Significant Impact. The MSF site is in an area with high paleontological potential, and paleontological resources are known to exist in the vicinity. Therefore, construction of the MSF could directly or indirectly destroy a unique paleontological resource, site, or unique geologic feature, resulting in a significant impact. The potential that other development would affect these resources during

construction is determined by a variety of factors, including the type of development that is proposed. Therefore, the incremental effects of the MSF during construction, in combination with projected growth, would be cumulatively considerable. However, with implementation of project-specific mitigation measures during construction, as discussed in Section 3.6 of Chapter 3 (MM PAL-1, MM PAL-2, and MM PAL-3), the cumulative impact would be less than significant.

3.19.7 ENERGY

The geographical cumulative impact area for the KNE energy analysis is defined as the utility service areas for the alignments and stations, the Hollywood Bowl Design Option, and the MSF. In addition, for assessing VMT reduction that would occur with project implementation, the entire SCAG region is included in the analysis.

3.19.7.1 ALIGNMENTS AND STATIONS

Less than Significant Impact. The alignments and stations and projected future development in the area would comply with applicable energy efficiency and management codes and regulations, including, but not limited to, the California Building Standards Code Energy Efficiency Standards (Title 24 Parts 6 and 11) and other provisions of local planning initiatives from Los Angeles County, the City of Los Angeles, and the City of West Hollywood, which would limit the inefficient or wasteful consumption of energy during construction and operational activities. All new Metro projects, including the alignments and stations, would be implemented in accordance with the Metro Green Construction Policy per the project measures described in Section 3.7 of Chapter 3. These include project measure PM AQ-1, the commitments in the Moving Beyond Sustainability Strategic Plan per project measure PM AQ-3, and the Metro Design Standards per project measure PM AQ-4, which control expenditure of energy resources to the maximum extent feasible. There is no present regional shortage of energy resources for land use and transportation development planning and implementation, and no foreseeable strains on existing resources have been identified. Moreover, KNE is included in the approved SCAG 2020-2045 Connect SoCal RTP/SCS, and thus has already been considered in the forecasted regional energy requirements. In addition, as described in Impact ENG-1 described in Section 3.7 of Chapter 3, operation of the alignments and stations would result in a reduction of energy consumption compared to the 2045 without Project Conditions. Therefore, the incremental effects of the alignments and stations, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.7.2 HOLLYWOOD BOWL DESIGN OPTION

Less than Significant Impact. The Hollywood Bowl Design Option and projected future development in the area would comply with applicable energy efficiency and management codes and regulations, including, but not limited to, the California Building Standards Code Energy Efficiency Standards (Title 24 Parts 6 and 11) and other provisions of local planning initiatives from Los Angeles County and the City of Los Angeles, which would limit the inefficient or wasteful consumption of energy during construction and operational activities. All new Metro projects, including the design option, would be implemented in accordance with the Metro Green Construction Policy per the project measures described in Section 3.7 of Chapter 3. These include project measure PM AQ-1, the commitments in the Moving Beyond Sustainability Strategic

Plan per project measure PM AQ-3, and the Metro Design Standards per project measure PM AQ-4, which control expenditure of energy resources to the maximum extent feasible. There is no present regional shortage of energy resources for land use and transportation development planning and implementation, and no foreseeable strains on existing resources have been identified. In addition, the design option would only be implemented with an alignment to increase rider connectivity as part of KNE, resulting in an overall net reduction in regional energy consumption due to the reduced VMT in the region compared to the 2045 without Project Conditions. Therefore, the incremental effects of the Hollywood Bowl Design Option, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.7.3 MAINTENANCE AND STORAGE FACILITY

Less than Significant Impact. The MSF and projected future development in the area would comply with applicable energy efficiency and management codes and regulations, including, but not limited to, the California Building Standards Code Energy Efficiency Standards (Title 24 Parts 6 and 11) and other provisions of local planning initiatives from Los Angeles County and the City of Los Angeles, which would limit the inefficient or wasteful consumption of energy during construction and operational activities. All new Metro projects, including the MSF, would be implemented in accordance with the Metro Green Construction Policy per the project measures described in Section 3.7 of Chapter 3. These include project measure PM AQ-1, the commitments in the Moving Beyond Sustainability Strategic Plan per project measure PM AQ-3, and the Metro Design Standards per project measure PM AQ-4, which control expenditure of energy resources to the maximum extent feasible. There is no present regional shortage of energy resources for land use and transportation development planning and implementation, and no foreseeable strains on existing resources have been identified. Therefore, the incremental effects of the MSF, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.8 GEOLOGY AND SOILS

3.19.8.1 ALIGNMENTS AND STATIONS

Less than Significant Impact. Impacts related to geology, soils, seismicity, and mineral resources are generally site-specific and localized. During construction and operation, the alignments and stations would not expose people or structures to the risk of loss, injury, or death involving fault rupture or seismic hazards, including liquefaction or landslides, and would not result in impacts related to soil erosion, unstable or expansive soils, or loss of access to mineral resources and recovery sites. The alignments and stations would comply with standards included in the Metro Rail Design Criteria (as set forth in project measure PM GEO-1 in Section 3.8 of Chapter 3), with all applicable state and local guidelines, and with other mandatory design requirements related to geologic, subsurface, and seismic hazards. Projected future development would also be required to comply with all applicable standards, requirements, and guidance. Therefore, the incremental effects of the alignments and stations, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.8.2 HOLLYWOOD BOWL DESIGN OPTION

Less than Significant Impact. Impacts related to geology, soils, seismicity, and mineral resources are generally site-specific and localized. During construction and operation, the Hollywood Bowl Design Option would not expose people or structures to the risk of loss, injury, or death involving fault rupture or seismic hazards, including liquefaction or landslides, and would not result in impacts related to soil erosion, unstable or expansive soils, or loss of access to mineral resources and recovery sites. The design option would comply with standards included in the Metro Rail Design Criteria (as set forth in project measure PM GEO-1 in Section 3.8 of Chapter 3), with all applicable state and local guidelines, and with other mandatory design requirements related to geologic, subsurface, and seismic hazards. Projected future development would also be required to comply with all applicable standards, requirements, and guidance. Therefore, the incremental effects of the Hollywood Bowl Design Option, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.8.3 MAINTENANCE AND STORAGE FACILITY

Less than Significant Impact. Impacts related to geology, soils, seismicity, and mineral resources are generally site-specific and localized. During construction and operation, the MSF would not expose people or structures to the risk of loss, injury, or death involving fault rupture or seismic hazards, including liquefaction or landslides, and would not result in impacts related to soil erosion, unstable or expansive soils, or loss of access to mineral resources and recovery sites. The MSF would comply with standards included in the Metro Rail Design Criteria (as set forth in project measure PM GEO-1 in Section 3.8 of Chapter 3), with all applicable state and local guidelines, and with other mandatory design requirements related to geologic, subsurface, and seismic hazards. Projected future development would also be required to comply with all applicable standards, requirements, and guidance. Therefore, the incremental effects of the MSF, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.9 GREENHOUSE GAS EMISSIONS

The cumulative RSA for greenhouse gas (GHG) emissions is the same as the project RSA described in Section 3.9 of Chapter 3. It is defined as the SCAG region, which encompasses Los Angeles, Orange, Riverside, Ventura, San Bernardino, and Imperial Counties.

3.19.9.1 ALIGNMENTS AND STATIONS

Less than Significant Impact. GHG emissions persist in the atmosphere for long periods and build up over time such that project-level GHG impact analysis is based on whether a project's incremental contribution to the effects of climate change would be cumulatively considerable. Therefore, individual project-level GHG emissions must be considered together and in conjunction with existing GHG levels and with reasonably foreseeable future GHG emissions when assessing project-level GHG impacts. The alignments and stations would generate direct GHG emissions during temporary construction activities from off-road equipment and on-road vehicle exhaust, as well as long-term indirect GHG emissions through energy use (e.g., energy generated for light rail transit propulsion, lighting and accessory equipment at station

platforms, and MSF operations). However, GHG emissions from on-road motor vehicles would be substantially reduced through transportation mode shift to transit as compared to 2045 without Project Conditions. The alignments and stations would not conflict with GHG emissions-reduction plans and policies and would contribute to California's goal to increase mass transit under the Assembly Bill 32 Scoping Plan. Operation of the alignments and stations would enhance regional transportation systems and contribute to planning efforts to reduce VMT and GHG emissions from transportation sources. Therefore, the incremental effects of the alignments and stations, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.9.2 HOLLYWOOD BOWL DESIGN OPTION

Less than Significant Impact. GHG emissions persist in the atmosphere for long periods and build up over time such that project-level GHG impact analysis is based on whether a project's incremental contribution to the effects of climate change would be cumulatively considerable. Therefore, individual project-level GHG emissions must be considered together and in conjunction with existing GHG levels and with reasonably foreseeable future GHG emissions when assessing project-level GHG impacts. The Hollywood Bowl Design Option would generate direct GHG emissions during temporary construction activities from off-road equipment and on-road vehicle exhaust, as well as long-term indirect GHG emissions through energy use (e.g., energy generated for light rail transit propulsion and lighting and accessory equipment at station platforms). However, implementation of any alignment with the Hollywood Bowl Design Option would substantially reduce GHG emissions from on-road motor vehicles through transportation mode shift to transit as compared to 2045 without Project Conditions. The project would not conflict with GHG emissions-reduction plans and policies and would contribute to California's goal to increase mass transit under the Assembly Bill 32 Scoping Plan. Operation of the project would enhance regional transportation systems and contribute to planning efforts to reduce VMT and GHG emissions from transportation sources. Therefore, the incremental effects of the Hollywood Bowl Design Option, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.9.3 MAINTENANCE AND STORAGE FACILITY

Less than Significant Impact. GHG emissions persist in the atmosphere for long periods and build up over time such that project-level GHG impact analysis is based on whether a project's incremental contribution to the effects of climate change would be cumulatively considerable. Therefore, individual project-level GHG emissions must be considered together and in conjunction with existing GHG levels and with reasonably foreseeable future GHG emissions when assessing project-level GHG impacts. The MSF would generate direct GHG emissions during temporary construction activities from off-road equipment and on-road vehicle exhaust, as well as long-term indirect GHG emissions through energy use (e.g., energy generated lighting, accessory equipment, and other operational activities). However, the MSF is necessary to support operation of the project, which would substantially reduce GHG emissions through transportation mode shift to transit as compared to 2045 without Project Conditions. The project would not conflict with GHG emissions-reduction plans and policies and would contribute to California's goal to increase mass transit under the Assembly Bill 32 Scoping Plan. Operation of the project would enhance regional transportation systems and contribute to planning efforts to reduce VMT and GHG emissions from transportation sources. Therefore,

the incremental effects of the MSF, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.10 GROWTH INDUCING IMPACTS

3.19.10.1 ALIGNMENTS AND STATIONS

Less than Significant Impact. The alignments and stations are intended to increase the overall accessibility and mobility of persons within the station RSAs and would not directly result in population growth within surrounding communities. The alignments and stations could indirectly affect population, housing, and employment growth in combination with other probable future projects in the region. Considered cumulatively, the increases in population, households, or employment could require construction or expansion of new community facilities, including police facilities, fire response facilities, schools, parks, or recreational facilities, or otherwise increase the use of existing facilities. However, the alignments and stations would not introduce new housing or commercial uses, have direct impacts on such facilities, generate new users of facilities, or otherwise increase use of such facilities. Implementation of the alignments and stations would not result in incremental increases that would be cumulatively considerable when considered together with similar impacts from other projected future development.

Similar to KNE, projected future development would be approved solely at the discretion of the Cities of Los Angeles and West Hollywood and would be subject to all applicable requirements and regulations of local jurisdictions. It is anticipated that any potential growth inducing impacts would be addressed and mitigated by restrictions imposed by local jurisdictions, and development around the stations would not occur in an uncontrolled manner. Changes in demographics associated with new development opportunities are anticipated to be consistent with the SCAG-adopted growth projections, which are based on the general plan land use designations of the Cities of Los Angeles and West Hollywood. Therefore, the incremental effects of the alignments and stations, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.10.2 HOLLYWOOD BOWL DESIGN OPTION

Less than Significant Impact. The Hollywood Bowl Design Option is intended to increase the overall accessibility and mobility of persons within the station RSA and would not directly result in population growth within surrounding communities. The design option could indirectly affect population, housing, and employment growth in combination with other probable future projects in the region. Considered cumulatively, the increases in population, households, or employment could require construction or expansion of new community facilities, including police facilities, fire response facilities, schools, parks, or recreational facilities, or otherwise increase the use of existing facilities. However, the design option would not introduce new housing or commercial uses, have direct impacts on such facilities, generate new users of facilities, or otherwise increase use of such facilities. Implementation of the design option would not result in incremental increases that would be cumulatively considerable when considered together with similar impacts from other projected future development.

Similar to KNE, projected future development would be approved solely at the discretion of the City of Los Angeles and would be subject to all applicable requirements and regulations of local jurisdictions. It is anticipated that any potential growth inducing impacts would be addressed and mitigated by restrictions imposed by local jurisdictions, and development around the stations would not occur in an uncontrolled manner. Changes in demographics associated with new development opportunities are anticipated to be consistent with the SCAG-adopted growth projections, which are based on the general plan land use designations of the City of Los Angeles. Therefore, the incremental effects of the Hollywood Bowl Design Option, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.10.3 MAINTENANCE AND STORAGE FACILITY

Less than Significant Impact. The MSF would not include new or temporary housing or businesses that would directly result in population growth. The cumulative impacts of the MSF on population, households, and employment would not be substantial enough to put a burden on nearby resources. Therefore, the incremental effects of the MSF would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.11 HAZARDS AND HAZARDOUS MATERIALS

The cumulative RSA for hazards and hazardous materials is the same as the project RSA described in Section 3.11 of Chapter 3. It is defined as a 0.25-mile radius around the alignments and stations, the Hollywood Bowl Design Option, and the MSF.

3.19.11.1 ALIGNMENTS AND STATIONS

Less than Significant Impact. Construction and operation of the alignments and stations would include implementation of subsurface gas risk-reduction practices. As described in Section 3.11 in Chapter 3, project measure PM HAZ-1 and mitigation measure MM HAZ-1 would avoid and minimize emissions of hazardous materials, substances, and mixtures within 0.25-mile of schools. Projected future development would also follow the applicable federal, state, and local regulations regarding hazardous materials, which would reduce impacts associated with related projects. Therefore, the incremental effects of the alignments and stations, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.11.2 HOLLYWOOD BOWL DESIGN OPTION

Less than Significant Impact. Construction and operation of the Hollywood Bowl Design Option would include implementation of subsurface gas risk-reduction practices. As described in Section 3.11 in Chapter 3, mitigation measure MM HAZ-1 would avoid and minimize emissions of hazardous materials, substances, and mixtures within 0.25 mile of schools. Projected future development would also follow the applicable federal, state, and local regulations regarding hazardous materials, which would reduce impacts associated with related projects. Therefore, the incremental effects of the Hollywood Bowl Design

Option, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.11.3 MAINTENANCE AND STORAGE FACILITY

Less than Significant Impact. There are no schools within a 0.25-mile radius of the MSF. As with the alignments and stations, projected future development would follow applicable federal, state, and local regulations regarding hazardous materials, which would reduce impacts associated with related projects. Therefore, the incremental effects of the MSF, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.12 HYDROLOGY AND WATER QUALITY

3.19.12.1 ALIGNMENTS AND STATIONS

Less than Significant Impact. The hydrology and water resources analysis includes implementation of construction and operational best management practices and flood event protection (as set forth in project measures PM HWQ-1, PM HWQ-2, and PM HWQ-3 in Section 3.12 of Chapter 3). Future development based on growth projections in the SCAG 2020-2045 RTP/SCS would require adherence to the codes and regulations specific to the regulatory framework of each project. In addition, the SCAG 2020-2045 RTP/SCS emphasizes consideration of "urban greening," a multi-benefit land use strategy that improves the relationship between the built and natural environment, on future projects and has benefits of improved water quality, groundwater recharge, and watershed health. This strategy leads to, at a minimum, continued efforts to prioritize low-impact development when feasible and use of project measures to address impacts. Therefore, the incremental effects of the alignments and stations, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.12.2 HOLLYWOOD BOWL DESIGN OPTION

Less than Significant Impact. The hydrology and water resources analysis includes implementation of construction and operational best management practices and flood event protection (as set forth in project measures PM HWQ-1, PM HWQ-2, and PM HWQ-3 in Section 3.12 of Chapter 3). Future development based on growth projections in the SCAG 2020-2045 RTP/SCS would require adherence to the codes and regulations specific to the regulatory framework of each project. In addition, the SCAG 2020-2045 RTP/SCS emphasizes consideration of "urban greening," a multi-benefit land use strategy that improves the relationship between the built and natural environment, on future projects and has benefits of improved water quality, groundwater recharge, and watershed health. This strategy leads to, at a minimum, continued efforts to prioritize low-impact development when feasible and use of project measures to address impacts. Therefore, the incremental effects of the Hollywood Bowl Design Option, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.12.3 MAINTENANCE AND STORAGE FACILITY

Less than Significant Impact. The hydrology and water resources analysis includes implementation of construction and operational best management practices and flood event protection (as set forth in project measures PM HWQ-1, PM HWQ-2, and PM HWQ-3 in Section 3.12 of Chapter 3). Future development based on growth projections in the SCAG 2020-2045 RTP/SCS would require adherence to the codes and regulations specific to the regulatory framework of each project. In addition, the SCAG 2020-2045 RTP/SCS emphasizes consideration of "urban greening," a multi-benefit land use strategy that improves the relationship between the built and natural environment, on future projects and has benefits of improved water quality, groundwater recharge, and watershed health. This strategy leads to, at a minimum, continued efforts to prioritize low-impact development when feasible and use of project measures to address impacts. Therefore, the incremental effects of the MSF, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.13 LAND USE AND PLANNING

3.19.13.1 ALIGNMENTS AND STATIONS

No Impact. The alignments and stations would not divide an established community, would comply with applicable plans, policies, and regulations, and would be compatible with existing and planned land uses within the RSA. The alignments and stations would support regional and local growth projections, as identified in Table 3.19-2, by providing regional transportation access and services in areas with significant population, household, and employment growth, and reducing regional VMT and GHG emissions. Therefore, the alignments and stations would not have an incremental effect in combination with projected growth, and there would be no cumulative impact.

3.19.13.2 HOLLYWOOD BOWL DESIGN OPTION

No Impact. The Hollywood Bowl Design Option would not divide an established community, would comply with applicable plans, policies, and regulations, and would be compatible with existing and planned land uses within the RSA. The design option would support regional and local growth projections, as identified in Table 3.19-2, by providing regional transportation access and services in areas with significant population, household, and employment growth, and reducing regional VMT and GHG emissions. Therefore, the Hollywood Bowl Design Option would not have an incremental effect in combination with projected growth, and there would be no cumulative impact.

3.19.13.3 MAINTENANCE AND STORAGE FACILITY

No Impact. The MSF would not divide an established community, would comply with applicable plans, policies, and regulations, and would be compatible with existing and planned land uses within the RSA. The MSF is an essential element in supporting the reliable operation of a light rail transit system and would be necessary for the implementation and operation of the project, which would support regional and local growth projections, as identified in Table 3.19-2, by providing regional transportation access and services in areas with significant population, household, and employment growth, and reducing regional

VMT and GHG emissions. Therefore, the MSF would not have an incremental effect in combination with projected growth, and there would be no cumulative impact.

3.19.14 NOISE AND VIBRATION

3.19.14.1 ALIGNMENTS AND STATIONS

Less than Significant Impact. The alignments and stations would cause temporary noise increases during construction. Adherence to local noise ordinances and federal guidelines, and to the guidelines and requirements set forth in project measures PM NOI-1 and PM NOI-2, as well as the requirements of mitigation measure MM NOI-1 described in Section 3.14 in Chapter 3, would avoid or reduce exceedance of noise-level limits. In addition, in order for there to be cumulative noise or vibration impacts, projects must occur at the same time and be in very close proximity to each other, which is unlikely given the construction horizon of the alignments and station. Projected future development would also follow the applicable federal and local regulations regarding noise and vibration, which would reduce the noise and vibration impacts associated with related projects. Therefore, the incremental effects of the alignments and stations, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.14.2 HOLLYWOOD BOWL DESIGN OPTION

Less than Significant Impact. The Hollywood Bowl Design Option would cause temporary noise increases during construction. Adherence to local noise ordinances and federal guidelines, and to the guidelines and requirements set forth in project measures PM NOI-1 and PM NOI-2, as well as the requirements of mitigation measure MM NOI-1 described in Section 3.14 in Chapter 3, would avoid or reduce exceedance of noise-level limits. In addition, in order for there to be cumulative noise or vibration impacts, projects must occur at the same time and be in very close proximity to each other, which is unlikely given the construction horizon of the design option. Projected future development would also follow the applicable federal and local regulations regarding noise and vibration, which would reduce the noise and vibration impacts associated with related projects. Therefore, the incremental effects of the Hollywood Bowl Design Option, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.14.3 MAINTENANCE AND STORAGE FACILITY

Less than Significant Impact. The MSF would cause temporary noise increases during construction. Adherence to local noise ordinances and federal guidelines, and to the guidelines and requirements set forth in project measures PM NOI-1 and PM NOI-2 described in Section 3.14 in Chapter 3 would avoid exceedance of noise-level limits. In addition, in order for there to be cumulative noise or vibration impacts, projects must occur at the same time and be in very close proximity to each other, which is unlikely given the construction horizon of the MSF. Projected future development would also follow the applicable federal and local regulations regarding noise and vibration, which would reduce the noise and vibration impacts associated with related projects. Therefore, the incremental effects of the MSF, in

combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.15 PUBLIC SERVICES AND RECREATION

3.19.15.1 ALIGNMENTS AND STATIONS

Less than Significant Impact. The San Vicente-Fairfax Alignment would require the full acquisition of the Los Angeles County Sheriff's Department West Hollywood Station for a construction staging and TBM launch site; however, with implementation of MM PUB-1, a relocated Sheriff's Station would be operational prior to construction of the San Vicente/Santa Monica Station that would meet the service requirements for the Los Angeles County Sheriff's Department. The alignments and stations would not reduce existing parkland or otherwise require full acquisition of any public facilities. Indirectly, the alignments and stations would provide opportunities for transit-oriented development around the station areas, which could include residential uses to meet the demand identified in Table 3.19-2. Those residential uses may result in an increased demand for local parks and other community facilities, and potentially a demand for additional recreational and other facilities. Because the alignments are located in an already highly urban setting with existing high-density zoning and land use, the potential for substantial changes in residential density as a result of the additional transit access is minimal and population patterns would be consistent with the regionally planned land use projections in Table 3.19-2.

Cumulative development, supported by access provided by the alignments and stations, would contribute to the creation of a complete neighborhood, which would provide residents with convenient access to goods and services, as well as connect with other neighborhoods via a network of pedestrian, bicycle, transit, and vehicle connections. The alignments and stations would be consistent with local land use plans, community/specific plans, and general plans. Future development in the area would be subject to a discretionary review process that would ensure that developments are consistent with the goals and policies of the City of Los Angeles and the City of West Hollywood. When land use impacts of the alignments and stations are combined with anticipated development in the area, the potential impact of the alignments and stations would be consistent with planned land use and development patterns, including provision of parklands and public services. Therefore, the incremental effects of the alignments and stations, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.15.2 HOLLYWOOD BOWL DESIGN OPTION

Less than Significant Impact. The Hollywood Bowl Design Option would not reduce existing parkland or otherwise require full acquisition of any public facilities. The design option would primarily serve the existing use of the Hollywood Bowl and, in combination with other development in the immediately surrounding area, would not reduce existing parkland or require full acquisition of community facilities. While approximately 100 of the 1,270 existing parking spaces at the Hollywood Bowl would be permanently displaced, there are other means of access to the facility and the additional KNE transit service at the new station would provide more capacity for patrons to reach the area.

Because the design option is in an already highly urban setting with existing high-density zoning and land use, the potential for substantial changes in residential density as a result of the additional transit access is minimal and population patterns would be consistent with the regionally planned land use projections in Table 3.19-2.

Cumulative development, supported by access provided by the design option, would contribute to the creation of a complete neighborhood, which would provide residents with convenient access to goods and services, as well as connect with other neighborhoods via a network of pedestrian, bicycle, transit, and vehicle connections. The design option would be consistent with local land use plans, community/specific plans, and general plans. Future development in the area would be subject to a discretionary review process that would ensure that developments are consistent with the goals and policies of the City of Los Angeles. When land use impacts of the design option are combined with anticipated development in the area, the potential impact of the design option would be consistent with planned land use and development patterns, including provision of parklands and public services. Therefore, the incremental effects of the Hollywood Bowl Design Option, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.15.3 MAINTENANCE AND STORAGE FACILITY

No Impact. This cumulative impact analysis considers development of the proposed MSF in conjunction with other development within the vicinity of the MSF in the City of Los Angeles based on growth projections in the SCAG 2020-2045 RTP/SCS. The MSF and other projected future development would be required to conform to the regulations of the City of Los Angeles and would be subject to its development review. The MSF would not require amendments to City of Los Angeles General Plans or Zoning Code. In addition, there are no fire stations, police stations, public schools, parks, or other public facilities within the MSF RSA. Therefore, the MSF would not have an incremental effect in combination with projected growth, and there would be no cumulative impact.

3.19.16 TRANSPORTATION

3.19.16.1 ALIGNMENTS AND STATIONS

Less than Significant Impact. The alignments and stations would be located in a heavily urbanized area that is rapidly developing, as projected in the SCAG 2020-2045 RTP/SCS. Although the precise locations and design of other projected future developments are unknown due to the long-term time frame of KNE, it is possible that other projects will be under construction at the same time and in the same vicinity as the alignments and stations. The potential exists for construction activities, including temporary street closures, to result in cumulatively considerable impacts to the transit, roadway, bicycle, and pedestrian network. However, as described in project measure PM TRA-2 in Section 3.16 in Chapter 3, Metro would develop a Transportation Management Plan in coordination with local jurisdictions, which would provide the opportunity to coordinate street closures with other current construction projects in the vicinity of the alignments. Construction of the alignments and stations would not result in a substantial increase to VMT, create geometric design hazards, or have an impact on emergency access. Therefore, construction

of the alignments and stations would not be cumulatively considerable, and the cumulative impact would be less than significant.

Operation of the alignments and stations would be consistent with regional and local transportation programs, plans, ordinances, and policies and would advance goals pertaining to expansion of the transit network. As a result, operation of the alignments and stations would not contribute to a cumulative impact conflicting with programs, plans, ordinances, or policies. Operation of the alignments and stations also would not contribute to a cumulatively considerable increase in VMT because VMT would decrease compared to the 2045 without Project Conditions. Furthermore, the regional travel demand model that produced the VMT projections accounts for population and employment growth consistent with the 2045 projections in the SCAG 2020-2045 RTP/SCS. Any cumulative impacts pertaining to VMT would have been identified as part of the model projections. Given the alignments and stations would be designed and operated consistent with all applicable standards and design criteria as set forth in project measure PM TRA-1 in Section 3.16 in Chapter 3, operation of the alignments and stations would not have a cumulative impact related to hazards due to geometric design features or incompatible uses. In addition, operation of the alignments and stations would not result in inadequate emergency access and would not have a cumulative impact. Therefore, the incremental effects of the alignments and stations, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.16.2 HOLLYWOOD BOWL DESIGN OPTION

Less than Significant Impact. The Hollywood Bowl Design Option would be located in a heavily urbanized area that is rapidly developing, as projected in the SCAG 2020-2045 RTP/SCS. Although the precise locations and design of other projected future developments are unknown due to the long-term time frame of KNE, it is possible that other projects will be under construction at the same time and in the same vicinity as the design option. The potential exists for construction activities, including temporary street closures, to result in cumulatively considerable impacts to the transit, roadway, bicycle, and pedestrian network. However, as described in project measure PM TRA-2 in Section 3.16 in Chapter 3, Metro would develop a Transportation Management Plan in coordination with local jurisdictions, which would provide the opportunity to coordinate street closures with other current construction projects in the vicinity of the design option. Construction of the design option would not result in a substantial increase to VMT, create geometric design hazards, or have an impact on emergency access. Therefore, construction of the design option would not be cumulatively considerable, and the cumulative impact would be less than significant.

Operation of the design option would be consistent with regional and local transportation programs, plans, ordinances, and policies and would advance goals pertaining to expansion of the transit network. As a result, operation of the design option would not contribute to a cumulative impact conflicting with programs, plans, ordinances, or policies. Operation of the design option also would not contribute to a cumulatively considerable increase in VMT because VMT would decrease compared to the 2045 without Project Conditions. Furthermore, the regional travel demand model that produced the VMT projections accounts for population and employment growth consistent with the 2045 projections in the SCAG 2020-2045 RTP/SCS. Any cumulative impacts pertaining to VMT would have been identified as part of the

model projections. Given the design option would be designed and operated consistent with all applicable standards and design criteria as set forth in project measure PM TRA-1 in Section 3.16 in Chapter 3, operation of the design option would not have a cumulative impact related to hazards due to geometric design features or incompatible uses. In addition, operation of the design option would not result in inadequate emergency access and would not have a cumulative impact. Therefore, the incremental effects of the Hollywood Bowl Design Option, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.16.3 MAINTENANCE AND STORAGE FACILITY

Less than Significant Impact. The MSF would be located in a heavily urbanized area that is rapidly developing, as projected in the SCAG 2020-2045 RTP/SCS. Although the precise locations and design of other projected future developments are unknown due to the long-term time frame of KNE, it is possible that other projects will be under construction at the same time and in the same vicinity as the MSF. The potential exists for construction activities, including temporary street closures, to result in cumulatively considerable impacts to the transit, roadway, bicycle, and pedestrian network. However, as described in project measure PM TRA-2 in Section 3.16 in Chapter 3, Metro would develop a Transportation Management Plan in coordination with local jurisdictions, which would provide the opportunity to coordinate street closures with other current construction projects in the vicinity of the MSF. Construction of the MSF would not result in a substantial increase to VMT, create geometric design hazards, or have an impact on emergency access. Therefore, construction of the MSF would not be cumulatively considerable, and the cumulative impact would be less than significant.

Operation of the MSF would be consistent with regional and local transportation programs, plans, ordinances, and policies and would advance goals pertaining to expansion of the transit network. As a result, operation of the MSF would not contribute to a cumulative impact conflicting with programs, plans, ordinances, or policies. Operation of the MSF also would not contribute to a cumulatively considerable increase in VMT because implementation of the KNE would lead to a decrease in VMT compared to the 2045 without Project Conditions, and the MSF is an essential part of KNE. Furthermore, the regional travel demand model that produced the VMT projections accounts for population and employment growth consistent with the 2045 projections in the SCAG 2020-2045 RTP/SCS. Any cumulative impacts pertaining to VMT would have been identified as part of the model projections. Given the MSF would be designed and operated consistent with all applicable standards and design criteria as set forth in project measure PM TRA-1 in Section 3.16 in Chapter 3, operation of the MSF would not have a cumulative impact related to hazards due to geometric design features or incompatible uses. In addition, operation of the MSF would not result in inadequate emergency access. Therefore, the incremental effects of the MSF, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.17 TRIBAL CULTURAL RESOURCES

The cumulative RSA for tribal cultural resources (TCRs) is the same as the project RSA described in Section 3.17 of Chapter 3. It includes areas where TCRs are protected by various federal, state, and local regulations.

3.19.17.1 ALIGNMENTS AND STATIONS

Less than Significant Impact. The alignments and stations have the potential to cause a significant impact related to unknown TCRs. However, implementation of mitigation measures MM TCR-1 and MM TCR-2 discussed in Section 3.17 of Chapter 3 would reduce these potential impacts to a less than significant level. Development of the alignments and stations in combination with the effects of projected growth located in the adjacent area would increase the potential for impacts to TCRs and could contribute to the loss of such resources in the region. The potential that development consistent with local plans would affect TCRs during construction is determined by a variety of factors, including the type of development that is proposed. However, other projects would also be required to implement mitigation measures to reduce impacts to a less than significant level. Therefore, the incremental effects of the alignments and stations, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.17.2 HOLLYWOOD BOWL DESIGN OPTION

Less than Significant Impact. The Hollywood Bowl Design Option has the potential to cause a significant impact related to unknown TCRs. However, implementation of mitigation measures MM TCR-1 and MM TCR-2 discussed in Section 3.17 of Chapter 3 would reduce these potential impacts to a less than significant level. Development of the design option in combination with the effects of projected growth located in the adjacent area would increase the potential for impacts to TCRs and could contribute to the loss of such resources in the region. The potential that development consistent with local plans would affect TCRs during construction is determined by a variety of factors, including the type of development that is proposed. However, other projects would also be required to implement mitigation measures to reduce impacts to a less than significant level. Therefore, the incremental effects of the Hollywood Bowl Design Option, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.17.3 MAINTENANCE AND STORAGE FACILITY

Less than Significant Impact. The MSF has the potential to cause a significant impact related to unknown TCRs. However, implementation of mitigation measures MM TCR-1 and MM TCR-2 discussed in Section 3.17 of Chapter 3 would reduce these potential impacts to a less than significant level. Development of the MSF in combination with the effects of projected growth located in the adjacent area would increase the potential for impacts to TCRs and could contribute to the loss of such resources in the region. The potential that development consistent with local plans would affect TCRs during construction is determined by a variety of factors, including the type of development that is proposed. However, other projects would also be required to implement mitigation measures to reduce impacts to a less than significant level. Therefore, the incremental effects of the MSF, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact would be less than significant.

3.19.18 UTILITIES AND SERVICE SYSTEMS

The cumulative RSA for utilities and service systems is the service areas of the utility providers that serve the 0.5-mile radius from the stations, the design option, and the MSF, as identified below. Cumulative impacts are analyzed separately for wastewater supply facilities, wastewater facilities, stormwater facilities, electric power, telecommunications, natural gas, and solid waste, as appropriate.

3.19.18.1 ALIGNMENTS AND STATIONS

3.19.18.1.1 WATER SUPPLY FACILITIES

Less than Significant Impact. The RSA for cumulative water supply impacts is the service areas of the Metropolitan Water District (MWD), the Los Angeles Department of Water and Power (LADWP), and the City of Beverly Hills service areas. Projected future development within these service areas would increase demand for water due to net increases in population, square footage, and intensity of uses. Future water demands for each service provider are identified in Section 3.18 of Chapter 3. Construction and operation of the alignments and stations would not substantially increase water usage within the geographical context. MWD, LADWP, and the City of Beverly Hills, through their respective 2020 urban water management plans, have indicated they can accommodate the additional demand for the alignments and stations as well as future growth assumed in the plans. In addition, the implementation of conservation measures on a project-specific basis and water shortage contingency plans would reduce additional water demand. Projected future development would be required to adhere to state and local water regulations and policies. Therefore, the incremental effects of the alignments and stations, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact related to water supply facilities would be less than significant.

3.19.18.1.2 WASTEWATER FACILITIES

Less than Significant Impact. The RSA for cumulative impacts related to wastewater facilities is the service areas of the City of Los Angeles District of Sanitation, the Los Angeles County Sanitary District, and the Hyperion Treatment Plant. Projected future development could expand existing infrastructure and/or increase the need for wastewater treatment facilities. This increase in wastewater treatment facilities would comply with federal, state, and local wastewater-related requirements. Construction and operation of the alignments and stations would not substantially increase wastewater treatment demand at the Hyperion Treatment Plant or require expansion of infrastructure by the City of Los Angeles District of Sanitation or the Los Angeles County Sanitary District. Therefore, the incremental effects of the alignments and stations, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact related to the need for additional or expanded wastewater facilities would be less than significant.

3.19.18.1.3 STORMWATER FACILITIES

Less than Significant Impact. The RSA for cumulative impacts related to stormwater is the service area of the Los Angeles County Flood Control District. Projected future development would comply with federal, state, and local stormwater-related regulations and policies. The existing channel and associated

stormwater drains are adequate to accommodate additional stormwater flows from the alignments and stations, and infrastructure currently exists in the City of Los Angeles, City of West Hollywood, and Los Angeles County. If new stormwater drainage facilities are required, they would be required to adhere to federal, state, and local regulations. Therefore, the incremental effects of the alignments and stations, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact related to the need for additional or expanded stormwater facilities would be less than significant.

3.19.18.1.4 ELECTRIC POWER

Less than Significant Impact. The RSA for cumulative impacts related to electric power is the LADWP and Southern California Edison service areas. The amount of electric power consumed by the alignments and stations combined with projected future development would be substantially less than the capacity in the service areas. Therefore, the incremental effects of the alignments and stations, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact related to the need for electric power would be less than significant.

3.19.18.1.5 TELECOMMUNICATION

Less than Significant Impact. The RSA for cumulative impacts related to telecommunication is the service areas of the telecommunication providers within the City of Los Angeles and the City of West Hollywood. Telecommunication facilities are present within the geographic area surrounding the alignments and stations and would be available for other projected future development. If new telecommunication facilities are required, they would be installed in compliance with relevant state and local regulations. Therefore, the incremental effects of the alignments and stations, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact related to the supply of telecommunication services and the need for additional or expanded facilities would be less than significant.

3.19.18.1.6 NATURAL GAS

No Impact. There would be no demand for natural gas from the alignments and stations. Therefore, the alignments and stations would not have an incremental effect in combination with projected growth, and there would be no cumulative impact related to the supply of natural gas and the need for additional or expanded facilities.

3.19.18.1.7 SOLID WASTE

Less than Significant Impact. The RSA for cumulative impacts related to solid waste is the area serviced by the City of Los Angeles and Los Angeles County. The City of Los Angeles and Los Angeles County contract with landfills to process solid waste. Landfills that would serve the alignments and stations are shown in Table 3.18-4 and Table 3.18-5 in Section 3.18 of Chapter 3. The alignments and stations would generate minimal solid waste during operation, and solid waste generated during construction would adhere to state and local regulations. Development of the alignments and stations combined with other projected future development could cumulatively increase demands on solid waste facilities. While the landfills identified in Table 3.18-4 and Table 3.18-5 in Section 3.18 may reach capacity in the future, there is no

indication that would result in a significant cumulative impact to regional landfill capacity. The alignments and stations would not create demand for solid waste services that exceed the capabilities of the local waste management system. Therefore, the incremental effects of the alignments and stations, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact related to solid waste would be less than significant.

3.19.18.2 HOLLYWOOD BOWL DESIGN OPTION

3.19.18.2.1 WATER SUPPLY FACILITIES

Less than Significant Impact. The RSA for cumulative water supply impacts is the service areas of the MWD and LADWP service areas. Projected future development within these service areas would increase demand for water due to net increases in population, square footage, and intensity of uses. Future water demands for each service provider are identified in Section 3.18 of Chapter 3. Construction and operation of the Hollywood Bowl Design Option would not substantially increase water usage within the geographical context. MWD and LADWP, through their respective 2020 urban water management plans, have indicated they can accommodate the additional demand for the design option as well as future growth assumed in the plans. In addition, the implementation of conservation measures on a project-specific basis and water shortage contingency plans would reduce additional water demand. Projected future development would be required to adhere to state and local water regulations and policies. Therefore, the incremental effects of the Hollywood Bowl Design Option, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact related to water supply facilities would be less than significant.

3.19.18.2.2 WASTEWATER FACILITIES

Less than Significant Impact. The RSA for cumulative impacts related to wastewater facilities is the service areas of the City of Los Angeles District of Sanitation, the Los Angeles County Sanitary District, and the Hyperion Treatment Plant. Projected future development could expand existing infrastructure and/or increase the need for wastewater treatment facilities. This increase in wastewater treatment facilities would comply with federal, state, and local wastewater-related requirements. Construction and operation of the Hollywood Bowl Design Option would not substantially increase wastewater treatment demand at the Hyperion Treatment Plant or require expansion of infrastructure by the City of Los Angeles District of Sanitation or the Los Angeles County Sanitary District. Therefore, the incremental effects of the Hollywood Bowl Design Option, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact related to the need for additional or expanded wastewater facilities would be less than significant.

3.19.18.2.3 STORMWATER FACILITIES

Less than Significant Impact. The RSA for cumulative impacts related to stormwater is the service area of the Los Angeles County Flood Control District. Projected future development would comply with federal, state, and local stormwater-related regulations and policies. The existing channel and associated stormwater drains are adequate to accommodate additional stormwater flows from the Hollywood Bowl

Design Option, and infrastructure currently exists in the City of Los Angeles and Los Angeles County. If new stormwater drainage facilities are required, they would be required to adhere to federal, state, and local regulations. Therefore, the incremental effects of the Hollywood Bowl Design Option, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact related to the need for additional or expanded stormwater facilities would be less than significant.

3.19.18.2.4 ELECTRIC POWER

Less than Significant Impact. The RSA for cumulative impacts related to electric power is the LADWP service area. The amount of electric power consumed by the Hollywood Bowl Design Option combined with projected future development would be substantially less than the capacity in the service areas. Therefore, the incremental effects of the Hollywood Bowl Design Option, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact related to the need for electric power would be less than significant.

3.19.18.2.5 TELECOMMUNICATION

Less than Significant Impact. The RSA for cumulative impacts related to telecommunication is the service areas of the telecommunication providers within the City of Los Angeles. Telecommunication facilities are present within the geographic area surrounding the Hollywood Bowl Design Option and would be available for other projected future development. If new telecommunication facilities are required, they would be installed in compliance with relevant state and local regulations. Therefore, the incremental effects of the Hollywood Bowl Design Option, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact related to the supply of telecommunication services and the need for additional or expanded facilities would be less than significant.

3.19.18.2.6 NATURAL GAS

No Impact. There would be no demand for natural gas from the Hollywood Bowl Design Option. Therefore, the design option would not have an incremental effect in combination with projected growth, and there would be no cumulative impact related to the supply of natural gas and the need for additional or expanded facilities.

3.19.18.2.7 SOLID WASTE

Less than Significant Impact. The RSA for cumulative impacts related to solid waste is the area serviced by the City of Los Angeles. The City of Los Angeles contracts with landfills to process solid waste. Landfills that would serve the Hollywood Bowl Design Option are shown in Table 3.18-4 and Table 3.18-5 in Section 3.18 of Chapter 3. The design option would generate minimal solid waste during operation, and solid waste generated during construction would adhere to state and local regulations. Development of the design option combined with other projected future development could cumulatively increase demands on solid waste facilities. While the landfills identified in Table 3.18-4 and Table 3.18-5 in Section 3.18 may reach capacity in the future, there is no indication that would result in a significant cumulative impact to regional landfill capacity. The design option would not create demand for solid waste services that exceed the capabilities of the local waste management system. Therefore, the incremental effects of

the Hollywood Bowl Design Option, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact related to solid waste would be less than significant.

3.19.18.3 MAINTENANCE AND STORAGE FACILITY

3.19.18.3.1 WATER SUPPLY FACILITIES

Less than Significant Impact. The RSA for cumulative water supply impacts is the service areas of the MWD and LADWP service areas. Projected future development within these service areas would increase demand for water due to net increases in population, square footage, and intensity of uses. Future water demands for each service provider are identified in Section 3.18 of Chapter 3. Construction and operation of the MSF would not substantially increase water usage within the geographical context. MWD and LADWP, through their respective 2020 urban water management plans, have indicated they can accommodate the additional demand for the MSF as well as future growth assumed in the plans. In addition, the implementation of conservation measures on a project-specific basis and water shortage contingency plans would reduce additional water demand. Projected future development would be required to adhere to state and local water regulations and policies. Therefore, the incremental effects of the MSF, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact related to water supply facilities would be less than significant.

3.19.18.3.2 WASTEWATER FACILITIES

Less than Significant Impact. The RSA for cumulative impacts related to wastewater facilities is the service areas of the City of Los Angeles District of Sanitation and the Hyperion Treatment Plant. Projected future development could expand existing infrastructure and/or increase the need for wastewater treatment facilities. This increase in wastewater treatment facilities would comply with federal, state, and local wastewater-related requirements. Construction and operation of the MSF would not substantially increase wastewater treatment demand at the Hyperion Treatment Plant or require expansion of infrastructure by the City of Los Angeles District of Sanitation. Therefore, the incremental effects of the MSF, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact related to the need for additional or expanded wastewater facilities would be less than significant.

3.19.18.3.3 STORMWATER FACILITIES

Less than Significant Impact. The RSA for cumulative impacts related to stormwater is the service area of the Los Angeles County Flood Control District. Projected future development would comply with federal, state, and local stormwater-related regulations and policies. The existing channel and associated stormwater drains are adequate to accommodate additional stormwater flows from the MSF, and infrastructure currently exists in Los Angeles County. If new stormwater drainage facilities are required, they would be required to adhere to federal, state, and local regulations. Therefore, the incremental effects of the MSF, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact related to the need for additional or expanded stormwater facilities would be less than significant.

3.19.18.3.4 ELECTRIC POWER

Less than Significant Impact. The RSA for cumulative impacts related to electric power is the LADWP service area. The amount of electric power consumed by the MSF combined with projected future development would be substantially less than the capacity in the service areas. Therefore, the incremental effects of the MSF, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact related to the need for electric power would be less than significant.

3.19.18.3.5 TELECOMMUNICATION

Less than Significant Impact. The RSA for cumulative impacts related to telecommunication is the service areas of the telecommunication providers within the City of Los Angeles. Telecommunication facilities are present within the geographic area surrounding the MSF and would be available for other projected future development. Telecommunication facilities would be installed in compliance with relevant state and local regulations. Therefore, the incremental effects of the MSF, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact related to the supply of telecommunication services and the need for additional or expanded facilities would be less than significant.

3.19.18.3.6 NATURAL GAS

No Impact. There would be minimal demand for natural gas from the MSF. Therefore, the MSF would not have an incremental effect in combination with projected growth, and there would be no cumulative impact related to the supply of natural gas and the need for additional or expanded facilities.

3.19.18.3.7 SOLID WASTE

Less than Significant Impact. The RSA for cumulative impacts related to solid waste is the area serviced by Los Angeles County. Los Angeles County contracts with landfills to process solid waste. Landfills that would serve the MSF are shown in Table 3.18-4 and Table 3.18-5 in Section 3.18 of Chapter 3. The MSF would generate minimal solid waste during operation, and solid waste generated during construction would adhere to state and local regulations. Development of the MSF combined with other projected future development could cumulatively increase demands on solid waste facilities. While the landfills identified in Table 3.18-4 and Table 3.18-5 in Section 3.18 may reach capacity in the future, there is no indication that would result in a significant cumulative impact to regional landfill capacity. The MSF would not create demand for solid waste services that exceed the capabilities of the local waste management system. Therefore, the incremental effects of the MSF, in combination with projected growth, would not be cumulatively considerable, and the cumulative impact related to solid waste would be less than significant.

3.19.19 SUMMARY OF CUMULATIVE IMPACTS

Table 3.19-3 lists the cumulative impacts for each environmental resource topic evaluated above. There would be significant and unavoidable cumulative impacts on historical resources and paleontological resources associated with construction of the alignments and stations, and there would be significant and unavoidable cumulative impacts on paleontological resources associated with construction of the Hollywood Bowl Design Option.

TABLE 3.19-3. SUMMARY OF CUMULATIVE IMPACTS

LEVEL OF IMPACT	ENVIRONMENTAL RESOURCE – ALIGNMENTS AND STATIONS	ENVIRONMENTAL RESOURCE – HOLLYWOOD BOWL DESIGN OPTION	ENVIRONMENTAL RESOURCE – MSF

No Impact/Less than Significant Impact	• Aesthetics
	• Air Quality
	• Biological Resources
	• Communities, Population, and Housing
	• Cultural and Paleontological Resources
	  ○ Archaeological Resources
	  ○ Disturbance of Human Remains
	• Energy
	• Geology and Soils
	• Greenhouse Gas Emissions
	• Growth Inducing Impacts
	• Hydrology and Water Quality
	• Land Use and Planning
	• Noise and Vibration
	• Public Services and Recreation
	• Transportation
	• Tribal Cultural Resources
	• Utilities and Service Systems[1]
		• Aesthetics
		• Air Quality
		• Biological Resources
		• Communities, Population, and Housing
		• Cultural and Paleontological Resources
		  ○ Historical Resources
		  ○ Archaeological Resources
		  ○ Disturbance of Human Remains
		• Energy
		• Geology and Soils
		• Greenhouse Gas Emissions
		• Growth Inducing Impacts
		• Hydrology and Water Quality
		• Land Use and Planning
		• Noise and Vibration
		• Public Services and Recreation
		• Transportation
		• Tribal Cultural Resources
		• Utilities and Service Systems[1]
			• Aesthetics
			• Air Quality
			• Biological Resources
			• Communities, Population, and Housing
			• Cultural and Paleontological Resources
			  ○ Historical Resources
			  ○ Archaeological Resources
			  ○ Disturbance of Human Remains
			  ○ Paleontological Resources
			• Energy
			• Geology and Soils
			• Greenhouse Gas Emissions
			• Growth Inducing Impacts
			• Hydrology and Water Quality
			• Land Use and Planning
			• Noise and Vibration
			• Public Services and Recreation
			• Transportation
			• Tribal Cultural Resources
			• Utilities and Service Systems[1]

Significant and Unavoidable Impact	• Cultural and Paleontological Resources
	  ○ Historical Resources
	  ○ Paleontological Resources
		• Cultural and Paleontological Resources
		  ○ Paleontological Resources
			N/A

Source: Connect Los Angeles Partners 2024
[1] The Utilities and Service Systems cumulative impact analysis in Section 3.19.18 shows impacts by individual utilities. However, this table provides the overall cumulative impact.
MSF = maintenance and storage facility

CHAPTER 4 OTHER CEQA REQUIRED TOPICS

Section 15126 of the California Environmental Quality Act (CEQA) Guidelines identifies the subjects that shall be discussed in an environmental impact report (EIR), including effects determined not to be significant, significant and unavoidable impacts, significant irreversible environmental changes, and growth inducing effects. Effects determined not to be significant, significant and unavoidable, and significant irreversible environmental changes are discussed in the following sections. Growth inducing effects are addressed in Section 3.10.

4.1 EFFECTS DETERMINED NOT TO BE SIGNIFICANT

Section 15128 of the CEQA Guidelines states "an EIR shall contain a brief statement indicating reasons that various possible effects of a project were determined not to be significant and not discussed in detail in the EIR." Effects found not to be significant for the project include agriculture and forestry resources and wildfire, which are summarized below. All other CEQA required environmental topics are addressed in Sections 3.2 through 3.19 of Chapter 3.

4.1.1 AGRICULTURE AND FORESTRY RESOURCES

4.1.1.1 IMPACT AFR-1: FARMLAND

Impact AFR-1: Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The KNE resource study area (RSA) for agricultural and forestry resources is defined as a 300-foot radius around the alignments and stations, design option, and Maintenance and Storace Facility (MSF). The KNE RSA is located in heavily developed urban and suburban areas of the City of Los Angeles and City of West Hollywood. The KNE RSA is located on land designated by the California Department of Conservation's Important Farmland map as Urban and Built-Up Land (California Department of Conservation 2022). Areas designated as Urban and Built-Up Land are not considered Important Farmland (i.e., Prime Farmland, Unique Farmland, or Farmland of Statewide Importance) under CEQA (Public Resources Code Sections 21060.1 and 21095 and CEQA Guidelines Appendix G). As discussed in Section 3.13, Land Use and Planning, there are no agricultural land uses within the KNE RSA. The KNE alignments and stations, design option, and MSF would not directly affect or result in conversion of this land to non-agricultural uses. Therefore, KNE would have no impact during construction and operation.

4.1.1.2 IMPACT AFR-2: AGRICULTURAL USE

Impact AFR-2: Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?

No Impact. There are no identified agricultural resources or areas zoned for agricultural uses within the KNE RSA. No Williamson Act contracts are applicable within the KNE RSA. The KNE alignments and

stations, design option, and MSF would not conflict with existing zoning for agricultural use or a Williamson Act contract. Therefore, KNE would have no impact during construction and operation.

4.1.1.3 IMPACT AFR-3: FORESTLAND

Impact AFR-3: Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code (PRC) Section 12220(g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

No Impact. The KNE RSA is located within a highly developed urban area with no forest land or timberland as defined by PRC Section 12220(g), Section 4526, or Section 51104(g). The KNE alignments and stations, design option, and MSF would not conflict with existing zoning or cause the rezoning of forest land or timberland. Therefore, KNE would have no impact during construction and operation.

4.1.1.4 IMPACT AFR-4: FORESTLAND CONVERSION

Impact AFR-4: Would the project result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The KNE RSA is located within a highly developed urban area with no forest land. The KNE alignments and stations, design option, and MSF would not change the existing environment in a manner that would result in the loss of forest land or conversion of forest land into non-forest uses. Therefore, KNE would have no impact during construction and operation.

4.1.1.5 IMPACT AFR-5: FARMLAND CONVERSION

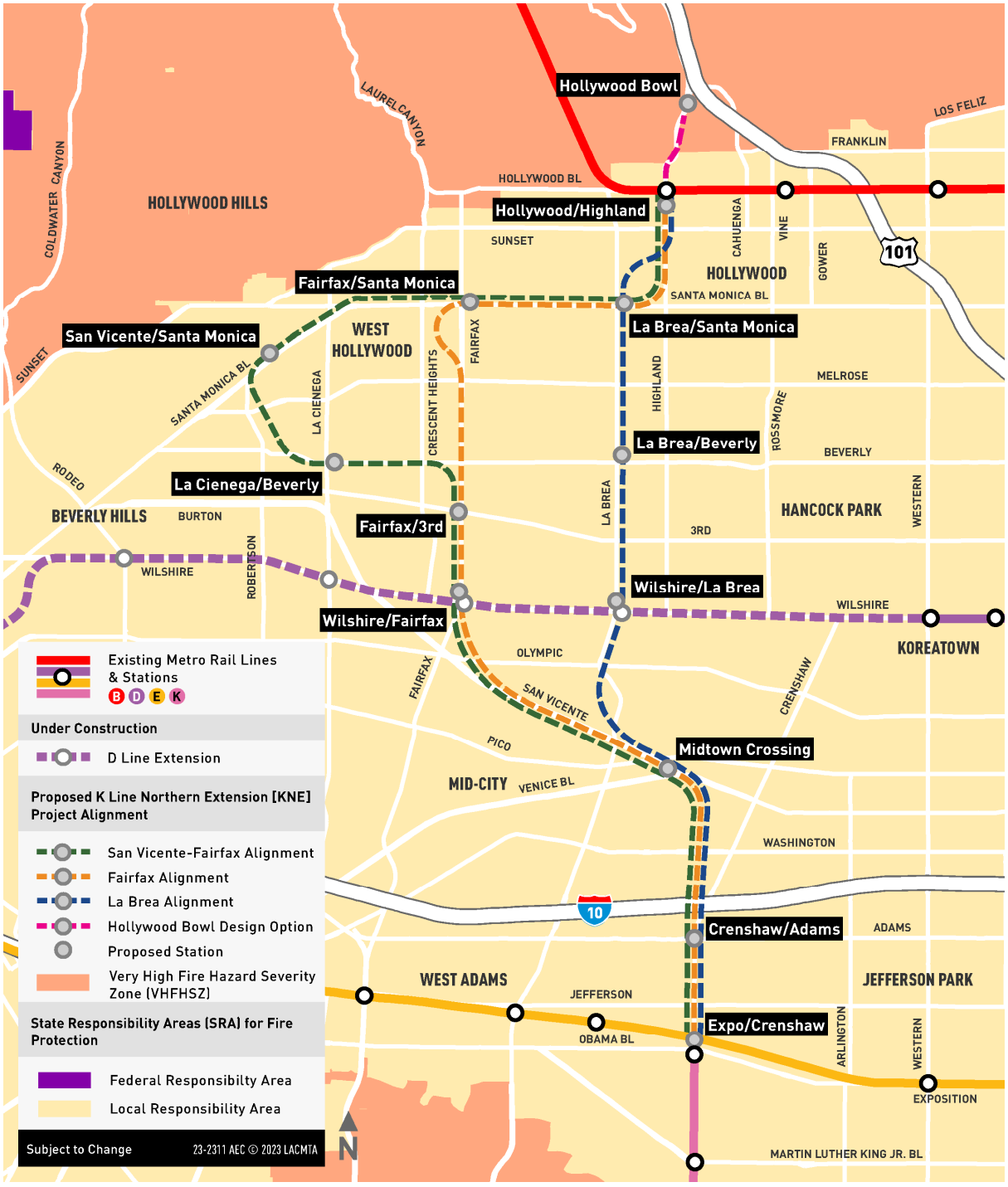
Impact AFR-5: Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. There are no farmland or forest land resources or land designated for farmland or forest land use within the KNE RSA. The KNE alignments and stations, design option, and MSF would not cause changes in the environment that could result in conversion of farmland or forest land to non-forest uses. Therefore, KNE would have no impact during construction and operation.

4.1.2 WILDFIRE

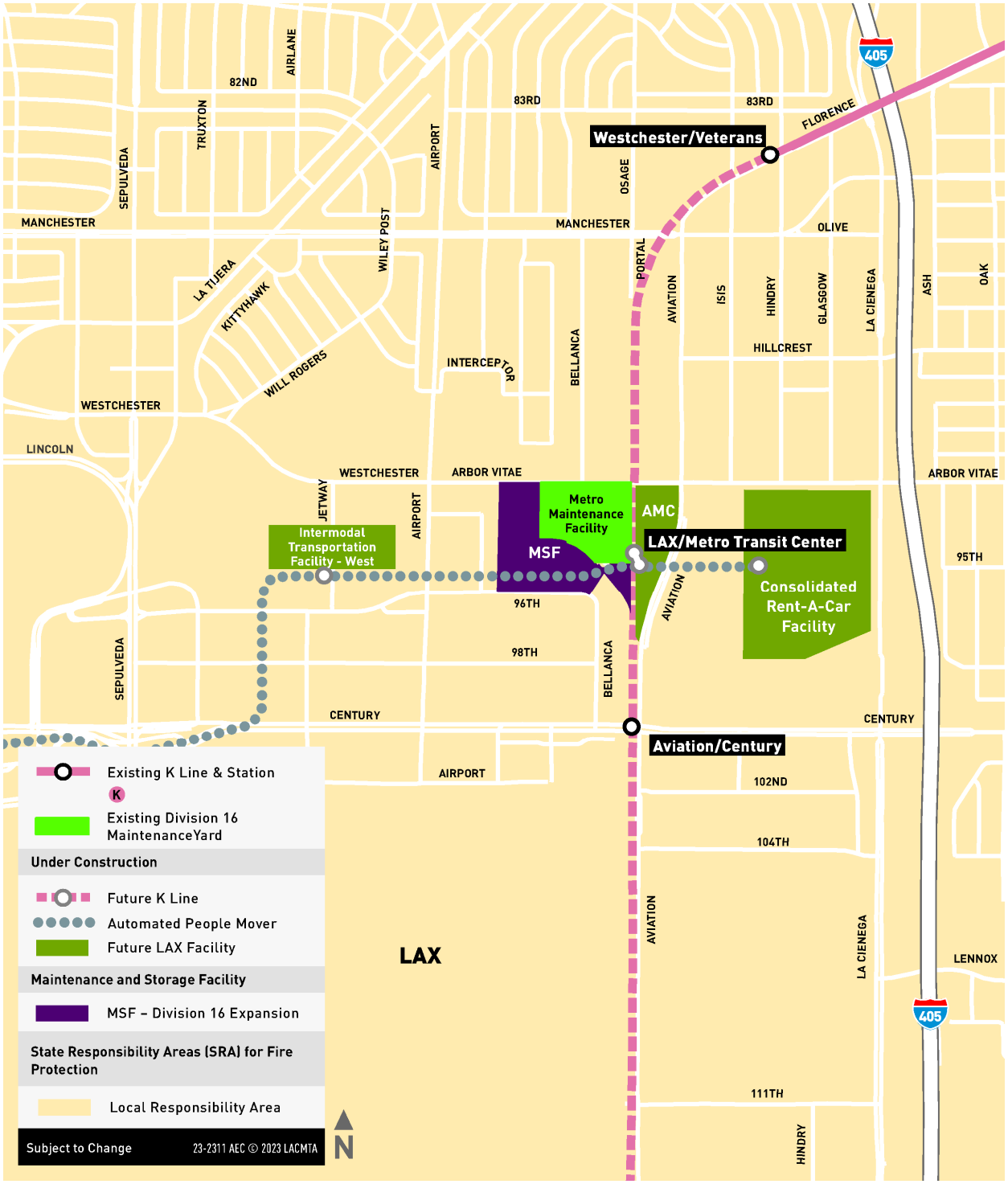
The KNE RSA for the wildfire assessment is defined as a 0.25-mile radius around the alignments and stations, design option, and MSF. According to Appendix G of the CEQA Guidelines, wildfire impacts are determined based on whether a proposed project would occur within or near a State Responsibility Area (SRA) or on lands classified as Very High Fire Hazard Severity Zones (VHFHSZ). The California Department of Forestry and Fire Protection (CAL FIRE) VHFHSZ database identifies areas designated as SRAs and Local Responsibility Areas (LRA) (CAL FIRE 2024). The KNE RSA is located within an LRA. The Hollywood Bowl Design Option is located within the LRA and in a VHFHSZ, as shown in Figure 4-1. The MSF is not located within an SRA or VHFHSZ, as shown in Figure 4-2.

FIGURE 4-1. FIRE HAZARD SEVERITY ZONES AND RESPONSIBILITY AREAS IN THE VICINITY OF THE PROJECT ALIGNMENTS



Source: Connect Los Angeles Partners 2024

FIGURE 4-2. FIRE HAZARD SEVERITY ZONES AND RESPONSIBILITY AREAS IN THE VICINITY OF THE MSF



Source: Connect Los Angeles Partners 2024

4.1.2.1 IMPACT WFR-1: EMERGENCY RESPONSE PLANS

Impact WFR-1: If located in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

ALIGNMENTS AND STATIONS

No Impact. The KNE alignments and stations are not located within lands classified as an SRA or a VHFHSZ and would not substantially impair an adopted emergency response plan or emergency evacuation plan. Therefore, the KNE alignments and stations would have no impact during construction and operation.

HOLLYWOOD BOWL DESIGN OPTION

Less than Significant Impact. The Hollywood Bowl Design Option is located outside of an SRA but within a VHFHSZ. However, with the exception of the station entrance(s), this portion of the project would be underground. Therefore, operation of the design option would not substantially impair an adopted emergency response plan or emergency evacuation plan. As part of the Los Angeles County Metropolitan Transportation Authority's (Metro) standard development procedures, construction and traffic management plans would be submitted to the City of Los Angeles Department of Transportation and the Los Angeles Fire Department for review and approval to ensure that the design option has adequate emergency access and escape routes during construction, in compliance with existing regulations. In addition, construction of the design option would not introduce any features that would preclude implementation of or alter these policies or procedures, and construction activities would not impair implementation of, or physically interfere with, the emergency response plan. Development and implementation of construction and traffic management plans would ensure that construction activities associated with the Hollywood Bowl Design Option would not impair an adopted emergency response plan or emergency evacuation plan. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction and operation.

MAINTENANCE AND STORAGE FACILITY

No Impact. The MSF is not located within lands classified as an SRA or a VHFHSZs and would not substantially impair an adopted emergency response plan or emergency evacuation plan. Therefore, the MSF would have no impact during construction and operation.

4.1.2.2 IMPACT WFR-2: WILDFIRE RISK AND POLLUTANTS

Impact WFR-2: If located in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones, due to slope, prevailing winds, and other factors, would the project exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

ALIGNMENTS AND STATIONS

No Impact. The KNE alignments and stations are not located within an SRA or a VHFHSZ and would not result in wildfire-related impacts, as shown in Figure 4-1. Therefore, the KNE alignments and stations would have no impact during construction and operation.

HOLLYWOOD BOWL DESIGN OPTION

Less than Significant Impact. The Hollywood Bowl Design Option is located outside of an SRA but within a VHFHSZ. While the entirety of design option is within an area with vegetation that can be prone to fire, the vegetated areas are not contiguous due to the presence of the roads and parking areas for the Hollywood Bowl. Additionally, with the exception of the station entrance(s), the design option would be underground where it would not exacerbate wildfire risks. The Hollywood Bowl Station would be situated within an existing parking area and would be constructed of non-flammable materials. Although the surrounding areas could experience a wildfire, the design option would not exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of wildfire impacts. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction and operation.

MAINTENANCE AND STORAGE FACILITY

No Impact. The MSF is not located within an SRA or a VHFHSZ and would not result in wildfire-related impacts, as shown in Figure 4-2. Therefore, the MSF would have no impact during construction and operation.

4.1.2.3 IMPACT WFR-3: INFRASTRUCTURE INSTALLATION AND MAINTENANCE IN WILDFIRE ZONES

Impact WFR-3: If located in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

ALIGNMENTS AND STATIONS

No Impact. The KNE alignments and stations are not located within or near an SRA or VHFHSZ. They would not require construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, telecommunications, or natural gas facilities, and would not require installation or maintenance of other associated infrastructure that may exacerbate fire risk. Therefore, the KNE alignments and stations would have no impact during construction and operation.

HOLLYWOOD BOWL DESIGN OPTION

Less than Significant Impact. The Hollywood Bowl Design Option is located outside of an SRA but within a VHFHSZ. However, it would not require construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, telecommunications, or natural gas facilities, and would not require installation or maintenance of other associated infrastructure that may exacerbate fire risk. Therefore,

the Hollywood Bowl Design Option would have a less than significant impact during construction and operation.

MAINTENANCE AND STORAGE FACILITY

No Impact. The MSF is not located within an SRA or VHFHSZ. It would not require construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, telecommunications, or natural gas facilities, and would not require installation or maintenance of other associated infrastructure that may exacerbate fire risk. Therefore, the MSF would have no impact during construction and operation.

4.1.2.4 IMPACT WFR-4: EXPOSURE TO RISKS

Impact WFR-4: If located in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones, would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

ALIGNMENTS AND STATIONS

No Impact. The KNE alignments and stations are not located within an SRA or VHFHSZ. As such, they would not exacerbate wildfire risks and would not expose people or structures to a significant risk associated with wildland fires, such as downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. Therefore, the KNE alignments and stations would have no impact during construction and operation.

HOLLYWOOD BOWL DESIGN OPTION

Less than Significant Impact. The Hollywood Bowl Design Option is located outside of an SRA but within a VHFHSZ. However, while the entirety of design option is within an area with vegetation that can be prone to fire, the vegetated areas are not contiguous due to the presence of the roads and parking areas for the Hollywood Bowl. Additionally, with the exception of the station entrance(s), the design option would be underground where it would not exacerbate wildfire risks. The Hollywood Bowl Station would be situated within an existing parking area and would be constructed of non-flammable materials. Operation of the design option would not exacerbate or cause conditions leading to landslides, liquefaction, lateral spreading, subsidence, or collapse. Additionally, implementation of project measure PM GEO-1 during design and construction would include stabilization of soils. As a result, construction and operation would not result in loss of soil stability. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction and operation.

MAINTENANCE AND STORAGE FACILITY

No Impact. The MSF is not located within an SRA or VHFHSZ. As such, it would not exacerbate wildfire risks and would not expose people or structures to a significant risk associated with wildland fires, such as downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. Therefore, the MSF would have no impact during construction and operation.

4.2 SIGNIFICANT AND UNAVOIDABLE IMPACTS

This section is prepared in accordance with Section 15126.2(c) of the CEQA Guidelines, which requires the discussion of any significant environmental impacts that cannot be avoided if a project is implemented. These include impacts that can be mitigated but cannot be reduced to a less than significant level. An analysis of environmental impacts is provided in Chapter 3, Environmental Analysis.

This environmental impact analysis for KNE identified significant impacts related to biological resources, cultural resources, paleontological resources, hazards and hazardous materials, noise and vibration, public facilities, and tribal cultural resources. Mitigation measures have been identified to reduce all identified significant impacts to a less than significant level, except for cultural resources and paleontological resources. KNE would result in a significant and unavoidable impact during construction related to cultural resources and paleontological resources as summarized below and discussed in further detail in Section 3.6, Cultural and Paleontological Resources.

4.2.1 CULTURAL RESOURCES

ALIGNMENTS AND STATIONS

Significant and Unavoidable Impact. Though mitigation would be implemented, construction of the KNE alignments and stations would cause substantial adverse changes in the significance of historical resources (Impact CUL-1). Specifically, physical demolition of historical resources would materially impair their significance. Mitigation measures MM CUL-3 (Historical Resources Archival Documentation), MM CUL 4 (Interpretive Program), and MM CUL-5 (Cultural Resources Monitoring and Mitigation Plan) would be implemented to reduce impacts at these resources, which are located at the parcels identified below.

For the KNE San Vicente–Fairfax Alignment, these parcels are:

- 6806 Hollywood Boulevard
- Rexall Drug Store, Lee Drug Company (6800 Hollywood Boulevard)
- Bank of America (6780 Hollywood Boulevard)
- Hollywood Theater (6766 Hollywood Boulevard)
- Santa Palm Car Wash (8787 Santa Monica Boulevard)

For the KNE Fairfax Alignment, these parcels are:

- 6806 Hollywood Boulevard
- Rexall Drug Store, Lee Drug Company (6800 Hollywood Boulevard)
- Bank of America (6780 Hollywood Boulevard)
- Hollywood Theater (6766 Hollywood Boulevard)

For the KNE La Brea Alignment, these parcels are:

- 6806 Hollywood Boulevard
- Rexall Drug Store, Lee Drug Company (6800 Hollywood Boulevard)
- Bank of America (6780 Hollywood Boulevard)
- Hollywood Theater (6766 Hollywood Boulevard)

Because these historical resources would be demolished during construction, the impact would not be reduced to a less than significant level. Therefore, the KNE San Vicente–Fairfax, Fairfax, and La Brea Alignments would have a significant and unavoidable impact related to historical resources during construction.

HOLLYWOOD BOWL DESIGN OPTION

There would be no significant and unavoidable impacts related to cultural resources for construction or operation of the Hollywood Bowl Design Option.

MAINTENANCE AND STORAGE FACILITY

There would be no significant and unavoidable impacts related to cultural resources for construction or operation of the MSF.

4.2.2 PALEONTOLOGICAL RESOURCES

ALIGNMENTS AND STATIONS

Significant and Unavoidable Impact. Although mitigation would be implemented, construction of the KNE alignments and stations could directly or indirectly destroy a unique paleontological resource, site, or unique geologic feature (Impact PAL-1). In areas where tunnel boring machines (TBMs) are used for tunneling, mitigation measures MM PAL-1 (Paleontological Resources Monitoring and Mitigation Plan), MM PAL-2 (Worker Education), and MM PAL-3 (Paleontological Monitoring) would not reduce impacts to a less than significant level. Therefore, the KNE San Vicente–Fairfax Alignment, the Fairfax Alignment, and the La Brea Alignment, which all involve TBMs, would have significant and unavoidable impacts during construction.

HOLLYWOOD BOWL DESIGN OPTION

Significant and Unavoidable Impact. Although mitigation would be implemented, construction of the Hollywood Bowl Design Option could directly or indirectly destroy a unique paleontological resource, site, or unique geologic feature (Impact PAL-1). In areas where the sequential excavation method is used to excavate the tunnels and the Hollywood Bowl Station, mitigation measures MM PAL-1 (Paleontological Resources Monitoring and Mitigation Plan), MM PAL-2 (Worker Education), and MM PAL-3 (Paleontological Monitoring) would not reduce impacts to a less than significant level. Therefore, the Hollywood Bowl Design Option, which would employ the sequential excavation method, would have a significant and unavoidable impact during construction.

MAINTENANCE AND STORAGE FACILITY

There would be no significant and unavoidable impacts related to paleontological resources for construction or operation of the MSF.

4.3 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Section 15126.2(d) of the CEQA Guidelines requires a discussion of any significant irreversible environmental changes that would be caused by a project. Specifically, Section 15126.2(d) states:

> *Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.*

Generally, a project would result in significant irreversible environmental changes if any of the following would occur:

- The primary and secondary impacts would generally commit future generations to similar uses;
- The project would involve a large commitment of nonrenewable resources;
- The project involves uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

Construction and operation of KNE, including the alignments and stations, design option, and MSF, would use nonrenewable resources, including fossil fuels, natural gas, water, and building materials. Construction would result in the irretrievable commitment of these nonrenewable energy resources, primarily fossil fuels and natural gas. However, the use of energy for construction activities would be consistent with other Metro construction projects and would not substantially affect the availability of such resources.

Operation of KNE would also consume nonrenewable resources. However, as discussed in Section 3.7, Energy, the consumption of resources for operation would be consistent with other Metro light rail lines and would provide a regional transportation benefit due to overall reductions in vehicle miles traveled and would not represent a wasteful or unnecessary use of energy.

The construction and operation of KNE would result in irreversible environmental changes to existing natural resources, such as a commitment to use of energy and water resources as a result of operation and maintenance. However, as discussed in Section 3.7, Energy, construction and operation of KNE would not result in significant environmental impacts nor result in the unnecessary, inefficient, or wasteful use of resources. KNE would contribute to a reduction in regional energy consumption that is consistent with objectives of regional planning strategies to reduce reliance on fossil fuels and nonrenewable resources.

CHAPTER 5 COMPARISON OF ALTERNATIVES

5.1 INTRODUCTION

The California Environmental Quality Act (CEQA) requires that an environmental impact report (EIR) describe a range of reasonable alternatives to the project or to the location of the project that could feasibly avoid or lessen any significant environmental impacts while substantially attaining the basic objectives of the project. Section 15126.6(a) of the CEQA Guidelines states:

> *An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation.*

An EIR should also evaluate the comparative merits of the alternatives. This chapter describes potential alternatives that were considered but eliminated from further evaluation and the reasons for their dismissal. It also discusses two alternatives to the project that have been carried forward for analysis and assessment of potential environmental impacts: the No Project Alternative and the High Frequency Bus Alternative.

Feasible alternatives to the project are selected and discussed in a manner intended to foster meaningful public participation and informed decision making. Among the factors that may be taken into account when addressing the feasibility of alternatives are environmental impacts, site suitability, economic viability, availability of infrastructure, general plan consistency, regulatory limitations, jurisdictional boundaries, and whether the proponent could reasonably acquire, control, or otherwise have access to accommodate an alternative.

5.2 PROJECT OBJECTIVES

Consistent with Section 15126.6(c) of the CEQA Guidelines, the range of alternatives include those that could feasibly accomplish the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. The project objectives are:

- Leverage the high-volume east-west rail network to provide new north-south connections and close a regional network gap between the Metro K, E, D, and B Lines.
- Increase the efficiency and convenience of transit trips by providing faster and more direct service, in turn creating more connections and mobility options
- Reduce vehicle miles traveled and greenhouse gas emissions by providing an alternative to congested roadways by offering high-capacity, grade-separated transit to meet existing, growing demand

- Maximize access to jobs, housing, and opportunity through the implementation of frequent and reliable rail service
- Improve mobility for transit-dependent residents by providing alternatives to congestion with efficient transit service and a cohesive high-capacity and high-speed transit network

The K Line Northern Extension (KNE) Fairfax Alignment, the proposed project, and other light rail alignments studied, would achieve the project objectives. As discussed in Section 5.5, the No Project Alternative would not achieve any of the project objectives, and the High Frequency Bus Alternative would achieve the project objectives but to a lesser degree than the KNE Fairfax Alignment.

5.3 ALTERNATIVES CONSIDERED BUT ELIMINATED

Over the past decade, Metro has studied the feasibility of a wide range of alignments and modes to provide a north-south rail line in the Central Los Angeles vicinity. The development of alternatives is detailed in Appendix 2-A, Alternatives Considered but Withdrawn from Further Evaluation, which describes the other project alternatives considered and withdrawn based on their ability to address the project objectives, potential to cause significant effects, and feasibility considerations such as site suitability, economic viability, and availability of infrastructure. The most recent studies that evaluated project alternatives have included:

- *Crenshaw Northern Extension Feasibility/Alternatives Analysis Study* (Feasibility/AA Study) (2018) – presented the relative performance and cost of five light rail alternatives—Vermont, La Brea, Fairfax, La Cienega, and San Vicente (shown in Figure 5-1).
- *Crenshaw Northern Extension Advanced Alternatives Analysis Screening Study* (Advanced AA) (2020) – refinement of alternatives evaluated in the Feasibility/AA Study with the addition of the San Vicente Alternative Design Option 2 – Hybrid, now called the San Vicente–Fairfax Alignment (shown in Figure 5-2). This study concluded with the recommendation to advance the San Vicente–Fairfax Alignment, the Fairfax Alignment, and the La Brea Alignment for environmental evaluation and the reduction of at-grade and aerial segments.
- *Post-Scoping Alignment Refinement Evaluation* (Post-Scoping) (2021) – further refinement of the three alignments and stations, including elimination of the at-grade and aerial segment, to be studied in the Draft EIR and presented during public scoping in May 2021 (shown in Figure 5-3).

Metro conducted community outreach throughout the development of the studies, informing the development of alternatives, recommendations, and Metro decisions on alternatives considered and eliminated, as summarized in Table 5-1.

TABLE 5-1. SUMMARY OF ALTERNATIVES CONSIDERED BUT ELIMINATED

STUDY/PHASE	ALTERNATIVES	REASON ELIMINATED
Feasibility/ AA Study (2018), Advanced AA (2020)	Aerial/At-Grade Vertical Configuration	Eliminated aerial and at-grade configurations (with the exception of a segment along San Vicente Blvd between Venice Blvd and Fairfax Ave) due to: • Insufficient width within the public ROW (street) • Increase in traffic congestion due to potential lane closures • Roadway and property impacts • Other environmental and community considerations
Feasibility/ AA Study (2018), Advanced AA (2020)	Vermont (Figure 5-1)	• Would fail to serve origins and destinations within study area. • Redundant with the existing rail system and all the western alignments, which connect riders to the D Line quicker than via Vermont. • Longer travel time for trips going north or west. • Would not serve any new neighborhoods/areas that would not be served with any of the other alternatives or are not already served by the existing Metro rail system.
Advanced AA (2020)	San Vicente (Figure 5-1 and Figure 5-2)	• Would result in a lengthy 1,300-foot-long (0.25-mile) transfer distance between K Line and the D Line at Wilshire/La Cienega Station. A seamless connection between the two lines is critical for system connectivity as a high volume of transfers is anticipated. • Dropped in favor of the San Vicente Design Option 2 – Hybrid (San Vicente–Fairfax) Alternative.
Advanced AA (2020)	San Vicente Design Option 1 – La Cienega (Figure 5-2)	• Would result in a lengthy 1,300-foot-long (0.25-mile) transfer distance between the project and the D Line at Wilshire/La Cienega Station. • Difficult to locate a station immediately adjacent to the La Cienega/Beverly intersection as well as the Santa Monica/La Cienega intersection due to alignment geometry constraints.
Advanced AA (2020)	Extension farther north to Universal Studios, Burbank Media District, and Hollywood Burbank Airport	• Beyond the objectives of the project (a connection between existing and proposed east-west Metro transit lines). • Not included in the Measure M funding allocated for the extension and would not meet the Measure M description. • Incorporated potential for future extension in design of KNE terminus.
Advanced AA (2020)	Interline[1] with the Metro E Line	• Would serve different travel patterns than identified in the objectives for the KNE project. • Would create constructability issues with interlining the underground K Line and the at-grade E Line due to structural needs and additional public ROW acquisition. • Insufficient E line capacity to accommodate additional rail service.
Advanced AA (2020)	Interline[1] with D Line from Crenshaw Blvd west, then continue north at San Vicente Blvd	• Would not be feasible to operate and interline the K Line (light rail) with the D Line (heavy rail) due to the different technologies and vehicle sizes. • Would miss opportunities to bring rail transit service to new communities.
Post-Scoping (2022)	Aerial/At-Grade Vertical Configuration – San Vicente Blvd between Venice Blvd and Fairfax Ave	• Would be less cost-effective to construct a short segment of aerial/at-grade along San Vicente Blvd between Venice Blvd and Fairfax Ave than remain fully underground. • Although tunneling is more expensive than aerial/at-grade construction on a per-foot basis, the efficiencies of continuing to tunnel would make a fully underground alignment less costly.

STUDY/PHASE	ALTERNATIVES	REASON ELIMINATED
Post-Scoping (2022)	Santa Monica/La Cienega Optional Station (Figure 5-3)	• Would serve a large portion of the station study area served by the proposed San Vicente/Santa Monica Station, which was within 0.5 mile of the Optional Santa Monica/La Cienega Station • Determined a single station would serve area on Santa Monica Blvd in lieu of two separate stations.
Post-Scoping (2022)	La Brea Alternative + Spur Line west along Santa Monica Blvd with transfer at Santa Monica/La Brea Station (proposed by stakeholders)	• Would not provide a direct extension of the K Line (thereby jeopardizing Measure M funding). • Would not result in significant cost savings compared to the San Vicente–Fairfax Alternative. • Would not provide a direct north-south connection to West Hollywood and other key destinations in the study area. • Would require the construction of a complex and costly wye junction[2] at Santa Monica/La Brea to either access the MSF or provide interlining service. • Would limit headways, resulting in less frequent service along the branches unless major additional trackwork was provided
Post-Scoping (2022)	Design Option 1 – Crenshaw Blvd Alignment between Crenshaw/Adams and Midtown Crossing	• Would result in higher construction costs and operations and maintenance costs. • Would provide less direct connection with longer travel times between Crenshaw/Adams and Midtown Crossing stations.

Source: Connect Los Angeles Partners 2024
[1] Interlining is where two routes share part of the same rail line; a physical connection is required between the tracks used by the different routes.
[2] A wye junction is a triangular configuration of rail tracks where three rail tracks join. This allows for flexibility in routing trains from any set of tracks to either of the other two sets of tracks.
AA = Alternatives Analysis; HRT = heavy rail transit; KNE = K Line Northern Extension; LRT = light rail transit; MSF = maintenance and storage facility; ROW = right-of-way

FIGURE 5-1. FEASIBILITY/ALTERNATIVES ANALYSIS STUDY ALTERNATIVES (2018)

Source: Metro 2018

FIGURE 5-2. ADVANCED ALTERNATIVES ANALYSIS STUDY ALTERNATIVES (2020)

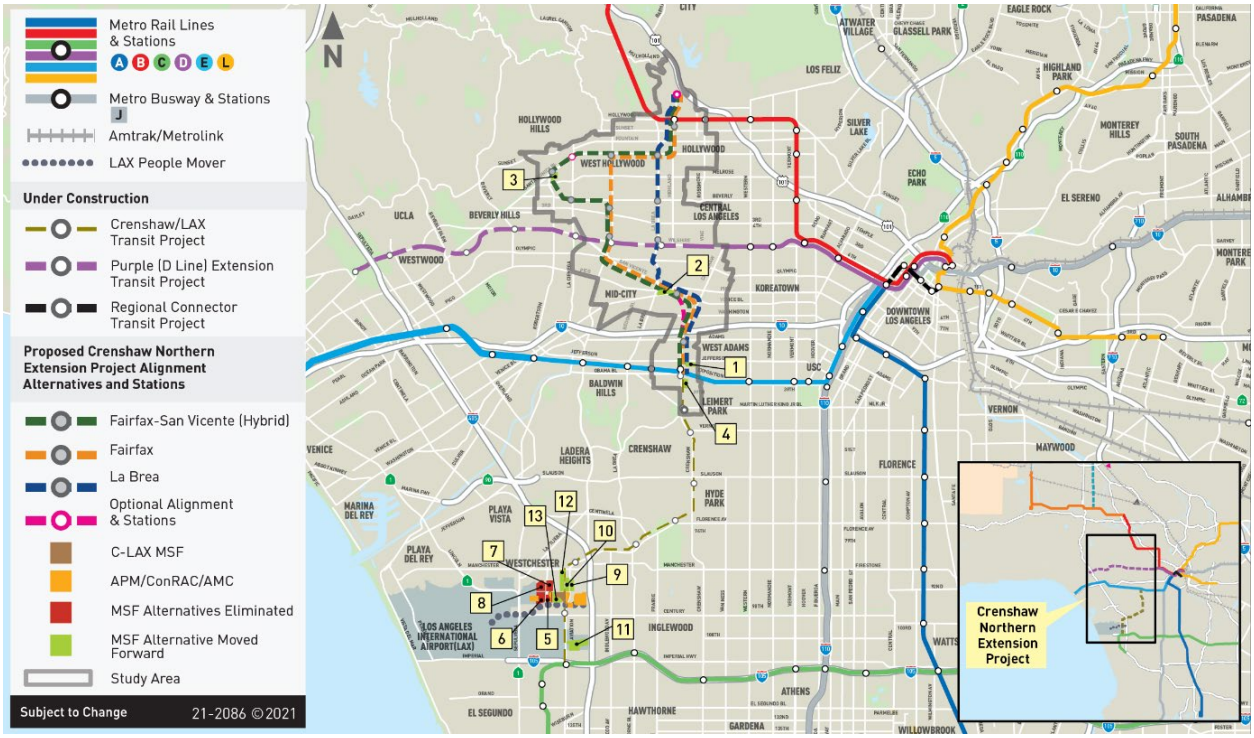
Source: Metro 2020a

FIGURE 5-3. ALTERNATIVES AS PRESENTED AT SCOPING (2021)

Source: Connect Los Angeles Partners 2021

In addition to the evaluation of various alignments and stations, Metro considered and evaluated a range of maintenance and storage facility (MSF) site options. Eleven MSF site options were evaluated during the Advanced AA Study. As part of pre-scoping analysis, two additional MSF options were added, including an expansion of the existing Metro Division 16 yard, for a total of 13 site options as illustrated in Figure 5-4.

FIGURE 5-4. POTENTIAL MSF SITES CONSIDERED (2021)



Source: Connect Los Angeles Partners 2021

The MSF options were evaluated to ensure the MSF site fulfilled the following criteria:

- Meets minimum size requirement, which is based on fleet size and alignment length. The longest alignment evaluated during the Advanced AA stage required 13.3 acres.
- Compatible with adjacent land uses.
- Does not have a major existing or planned site conflict.
- Close to the K Line.

Following the 2020 Advanced AA Study and the 2022 Post-Scoping Alignment Refinement Evaluation screening processes, additional alignment refinements and operations analyses were conducted to confirm MSF size and location requirements. Twelve of the 13 MSF options were removed from consideration (Options 1-12). MSF Option 13, in the vicinity of Los Angeles International Airport, was recommended for inclusion in the Draft EIR. Although Option 13 is located south of Arbor Vitae Street, it would be an expansion of the existing Division 16 facility, rather than a new facility, and would use the same rail junction as Division 16.

Table 5-2 summarizes the screening of MSF options, which is discussed further in Appendix 2-A, Alternatives Considered but Withdrawn from Further Evaluation, of this Draft EIR.

TABLE 5-2. MAINTENANCE AND STORAGE FACILITY SCREENING

OPTION	MSF OPTION LOCATION	JURISDICTION	PRIMARY REASON FOR DISQUALIFICATION
1	36th St	Los Angeles	• Minimum size requirement • Adjacent land use compatibility
2	Midtown Crossing	Los Angeles	• Adjacent land use compatibility
3	San Vicente/Santa Monica	West Hollywood	• Minimum size requirement • Adjacent land use compatibility
4	Crenshaw/Expo	Los Angeles	• Minimum size requirement • Adjacent land use compatibility
5	SE Airport/Arbor Vitae	Los Angeles	• Major existing/planned site conflicts • Distance to the K Line
6	SW Airport/Arbor Vitae	Los Angeles	• Major existing/planned site conflicts • Distance to the K Line
7	NE Airport/Arbor Vitae	Los Angeles	• Major existing/planned site conflicts • Adjacent land use compatibility • Distance to the K Line
8	NW Airport/Arbor Vitae	Los Angeles	• Major existing/planned site conflicts • Adjacent land use compatibility • Distance to the K Line
9	NE Aviation/Arbor Vitae	Inglewood	• Distance to the K Line
10	NW Aviation/Arbor Vitae	Inglewood	• Adjacent land use compatibility • Operations and Management costs
11	111th St	Los Angeles	• New facility and junction south of Arbor Vitae St
12	NW Mainline/Arbor Vitae	Los Angeles	• Adjacent land use compatibility • Operations and Management costs
13 (selected as the proposed MSF)	West of C-LAX MSF	Los Angeles	• Met screening criteria and advanced to Draft EIR

Source: Connect Los Angeles Partners 2024
EIR = environmental impact report; LAX = Los Angeles International Airport; MSF = maintenance and storage facility; SE = southeast; SW = southwest; NE = northeast; NW = northwest

5.4 ALTERNATIVES CONSIDERED

For the purposes of this Draft EIR, the proposed project is the KNE Fairfax Alignment, which would extend the K Line to the D Line, connecting to the Wilshire/Fairfax Station (under construction) and continue north to the B Line at the Hollywood/Highland Station (Figure 5-5). The two other rail alignments evaluated in the Draft EIR (San Vicente-Fairfax and La Brea) would also provide a rail connection to the D and B Lines. As such, the alternatives considered in this section are alternatives to a rail extension.

FIGURE 5-5. KNE FAIRFAX ALIGNMENT (PROPOSED PROJECT)

Source: Connect Los Angeles Partners 2024

5.4.1 NO PROJECT ALTERNATIVE

CEQA Guidelines Section 15126.6(e) requires preparation of a No Project Alternative, which assumes that Metro would not implement the project. The No Project Alternative provides a comparison of impacts that would occur without the KNE Fairfax Alignment and other rail alignments, evaluated within the context of existing and foreseeable transit enhancements including capital and operational transportation improvements. The No Project Alternative looks at forecasted conditions in Los Angeles County for the year 2045, including population and employment growth projections consistent with the Southern California Association of Governments (SCAG) 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (SCAG 2020). Under the No Project Alternative, no new infrastructure would be built, aside from transit and highway projects currently under construction or projects funded for construction, environmentally cleared, planned to be in operation by 2045, and identified in the adopted Metro Long Range Transportation Plan (Metro 2020b) and the SCAG 2020-2045 RTP/SCS, as well as additional projects funded by the Measure M sales tax initiative approved by voters in November 2016.

Table 5-3 lists the transit and freeway projects assumed in the No Project Alternative. Figure 5-6 illustrates the assumed Metro transit projects in the region under the No Project Alternative.

TABLE 5-3. NO PROJECT ALTERNATIVE PLANNED IMPROVEMENTS (2045)

PROJECT TYPE	PROJECT[1]	TO/FROM
Rail (Under Construction/ Planned)[1]	Metro D Line Extension Project	Wilshire/Western to Westwood/Veterans Affairs Hospital
	Metro C Line Extension Project[2]	Redondo Beach to Torrance
	Metro K Line[3]	Westchester/Veterans to Aviation/LAX
	Metro Eastside Transit Corridor Phase 2	Atlantic to Lambert
	Metro Foothill Extension to Montclair	Azusa to Montclair
	Metro Sepulveda Transit Corridor Project	Van Nuys Metrolink Station to Metro E Line
	Metro East San Fernando Valley Light Rail Transit Project	Sylmar to Metro G Line Van Nuys Station
	Metro Southeast Gateway Line Transit Corridor Project	Slauson to Pioneer
	Los Angeles World Airport Automated People Mover	Consolidated Rent-A-Car Facility to LAX Terminals
Bus and Bus Rapid Transit (Under Construction/ Planned)[4]	Metro G Line Bus Rapid Transit Improvement Project	North Hollywood to Chatsworth
	Metro Vermont Transit Corridor	120th St to Hollywood Blvd
	Metro North San Fernando Valley Transit Corridor	Northridge to North Hollywood
	Metro North Hollywood to Pasadena Bus Rapid Transit Corridor Project	North Hollywood to Pasadena
	Lincoln Boulevard Bus Rapid Transit	Santa Monica to LAX
	La Brea Avenue Bus Priority Lanes (Peak Period Only)	Coliseum St to Sunset Blvd
	NextGen Bus Network	Various locations
Freeway (Under Construction/ Planned)[5]	I-5 North Capacity Enhancements	SR 14 to Lake Hughes Rd
	I-405 (Sepulveda Pass) Express Lanes Project	I-10 to US-101
	SR 57/SR-60 Interchange Improvements	SR-70/SR-60
	I-105 Express Lane	I-405 to I-605
	I-5 Corridor Improvements	I-605 to I-710

Source: Connect Los Angeles Partners 2024
[1] Planned projects may be subject to change.
[2] Under the No Project Alternative, the Metro C Line would operate from LAX/Metro Transit Center to Norwalk.
[3] The Metro C Line extension to Torrance would operate as a southern extension of the K Line. Under the No Project Alternative, the K Line would operate from Expo/Crenshaw to Torrance.
[4] The municipality bus system network is based on service patterns for Los Angeles Department of Transportation DASH and Commuter Express, West Hollywood CityLine, Santa Monica Big Blue Bus, Culver CityBus, and Antelope Valley Transit Authority.
LAX = Los Angeles International Airport

FIGURE 5-6. NO PROJECT ALTERNATIVE PLANNED METRO TRANSIT MAP (2045)

Source: Connect Los Angeles Partners 2024
[1] Under the No Project Alternative, the Metro C Line would operate from LAX/Metro Transit Center to Norwalk and the Metro K Line would operate from Expo/Crenshaw to Torrance.

5.4.2 HIGH FREQUENCY BUS ALTERNATIVE

The High Frequency Bus (HFB) Alternative consists of a Metro implemented and operated rapid bus service instead of a light rail extension to connect the terminus of the Metro K Line at the Expo/Crenshaw Station to the Metro D Line at the Wilshire/La Brea Station and the Metro B Line at the Hollywood/Highland Station via Crenshaw Boulevard, Venice Boulevard, San Vicente Boulevard, La Brea Avenue, Hollywood Boulevard, Highland Avenue, and Sunset Boulevard (Figure 5-7). The HFB Alternative would serve the La Brea Avenue corridor instead of the Fairfax Avenue corridor because La Brea Avenue is the shortest route to connect the K, E, B, and D Lines and has existing enhanced bus infrastructure in some areas (La Brea Avenue Bus Priority Lanes). Under this alternative, 12 bus stops would be retrofitted between Exposition Boulevard and Hollywood/Highland, with approximately 0.5-mile spacing consistent with Metro guidelines for station spacing in urban corridors for bus rapid transit:

- Expo/Crenshaw (connection to K/E Line)
- Crenshaw/Adams
- Crenshaw/Washington
- Midtown Crossing (Pico-Rimpau Transit Center)
- La Brea/Olympic
- Wilshire/La Brea (connection to D Line)
- La Brea/3rd
- La Brea/Beverly
- La Brea/Melrose
- La Brea/Santa Monica
- La Brea/Sunset
- Hollywood/Highland (connection to B Line)

The HFB Alternative would introduce a new bus route in addition to existing bus service along Crenshaw Boulevard (Line 210), Venice Boulevard (Line 33), San Vicente Boulevard (Line 30), and La Brea Avenue (Line 212). The proposed bus stops for the HFB Alternative would be located at existing Metro bus stops. The HFB Alternative would operate as a rapid bus service with some bus rapid transit characteristics, including:

- Headways similar to those proposed for light rail (five minute peak period headways).
- Transit signal priority systems, which give priority to transit vehicles at signalized intersections by enabling an early green signal or holding a green signal, pending city approval.
- Enhanced bus stop amenities, including the installation of new signs at bus stops and shelters, as well as solar-powered lighting, benches, and trash receptacles.
- Low-floor electric buses to allow for faster and easier boarding and alighting. The charging infrastructure required for Metro's battery-electric bus fleet would be planned to accommodate the additional fleet required for operation of the HFB Alternative.
- No dedicated lanes with the exception of where they already exist along La Brea Avenue north of Olympic Boulevard and those that are planned for Hollywood Boulevard and La Brea Avenue south of Olympic Boulevard.

The construction and operation of the HFB Alternative would be within the public ROW and would include minor improvements such as travel lane restriping, curb extensions, elimination of street parking, and bus stop amenities, where feasible. The HFB Alternative would not require a separate maintenance facility, as buses would utilize and be maintained at existing Metro facilities, including Division 5 in Hyde Park or Division 7 in West Hollywood.

FIGURE 5-7. HIGH FREQUENCY BUS ALTERNATIVE

Source: Connect Los Angeles Partners 2024

5.5 ANALYSIS OF ALTERNATIVES

Under CEQA Guidelines Section 15126.6(d), each alternative should be evaluated in sufficient detail to allow meaningful evaluation, analysis, and comparison with the proposed project. While three KNE light rail alignments are analyzed equally in this Draft EIR, the proposed project is the KNE Fairfax Alignment, which would extend the K Line to the D Line at the Wilshire/Fairfax Station and the B Line at the Hollywood/Highland Station. Therefore, the following sections compare the impacts of the No Project Alternative and the HFB Alternative to KNE Fairfax Alignment only. The alternatives analysis addresses the same environmental topics that were evaluated in Chapter 3, Environmental Analysis. The following sections describe the impacts of the No Project Alternative and the HFB Alternative.

5.5.1 KNE FAIRFAX ALIGNMENT (PROPOSED PROJECT)

As discussed earlier, while three KNE light rail alignments are evaluated in detail in Chapter 3, for the purposes of this Draft EIR, the proposed project is the KNE Fairfax Alignment. Therefore, the alternatives considered in this section are alternatives to the KNE Fairfax Alignment.

Sections 3.1 through 3.19 of this Draft EIR analyze the environmental impacts of the KNE Fairfax Alignment. Where applicable, these sections identify feasible mitigation measures that could avoid or reduce significant impacts and identify whether the mitigation measures would reduce these impacts to a less than significant level. Chapter 3 also identifies the significant cumulative impacts resulting from the combined effects of the project and related past, present, and reasonably probable future projects. The KNE Fairfax Alignment impact analysis conclusions are summarized in Table 5-4.

5.5.2 NO PROJECT ALTERNATIVE

The following sections discuss the construction and operational impacts of the No Project Alternative.

5.5.2.1 AESTHETICS

CONSTRUCTION

Less Than Significant Impact. The No Project Alternative would not construct a new light rail line between the K, E, D, and B Lines. While construction activities associated with a light rail line would not occur in the project area, other development in the region would continue, thus potentially causing temporary construction disruptions. New development, redevelopment, or other infrastructure related to growth projections in the SCAG 2020-2045 RTP/SCS would also be required to be consistent with local planning documents and policies and to comply with local ordinances and regulations, including those related to visual character and quality, scenic quality, and public views. Therefore, the No Project Alternative would have a less than significant impact during construction related to aesthetics.

OPERATION

Less Than Significant Impact. The No Project Alternative would not operate a new light rail line between the K, E, D, and B Lines, but other development in the region would continue, thus potentially altering the visual character within Central Los Angeles. New development, redevelopment, or other infrastructure related to growth projections in the SCAG 2020-2045 RTP/SCS would also be required to be consistent with local planning documents and policies and to comply with local ordinances and regulations, including

those related to visual character and quality, scenic quality, and public views. Therefore, the No Project Alternative would have a less than significant impact during operation related to aesthetics.

5.5.2.2 AIR QUALITY

CONSTRUCTION

Less Than Significant Impact. The No Project Alternative would not construct a new light rail line between the K, E, D, and B Lines; however, construction activities associated with other planned developments in the region would occur that have the potential to increase criteria pollutants or emissions or expose sensitive populations to concentrated pollutants. Other planned developments would be required to complete their own assessment of air quality impacts and develop appropriate mitigation. Therefore, the No Project Alternative would have a less than significant impact during construction related to air quality.

OPERATION

Significant and Unavoidable Impact. Under the No Project Alternative, no new, high-quality transit would operate between the Metro K, E, D, and B Lines, which is inconsistent with the transit network assumptions in the 2020-2045 SCAG RTP/SCS. As a result, the No Project Alternative would not decrease the vehicle miles traveled (VMT) and, therefore, would not result in associated air quality improvements from private automobile trips that would have shifted to light rail as assumed in the 2020-2045 SCAG RTP/SCS. Therefore, the No Project Alternative would have a significant and unavoidable impact during operation related to air quality with respect to consistency with applicable air quality plans.

5.5.2.3 BIOLOGICAL RESOURCES

CONSTRUCTION

Less Than Significant Impact. Under the No Project Alternative, the light rail alignment between the K, E, D, and B Lines would not be constructed, but other planned development in the area would continue. This area of Los Angeles is considered to be bat roosting habitat because some bat species with potential to be in the area are migratory and could be found in counties throughout the state. In addition, for birds protected under the Migratory Birds Treaty Act and for special-status bat species, the nesting and foraging habitat includes trees in the area. Nesting and roosting substrate removal due to current and future development in the vicinity of the project is the biggest threat to bird species (U.S. Fish and Wildlife Service 2023). While the construction of light rail would not affect these species, the other ongoing development in the vicinity has the potential to result in impacts. The other developments would be required to complete their own independent environmental review and identify appropriate impacts and mitigations. As a result, the No Project Alternative would have a less than significant impact during construction related to biological resources.

OPERATION

No Impact. The No Project Alternative would not operate a new light rail line between the K, E, D, and B Lines. While other development is likely to continue to proceed, any impact to sensitive species would likely occur during construction activities, not operation. Therefore, the No Project Alternative would have no impact related to biological resources during operation.

5.5.2.4 COMMUNITIES, POPULATION, AND HOUSING

CONSTRUCTION

Less Than Significant Impact. Under the No Project Alternative, the light rail between the K, E, D, and B Lines would not be constructed. Development in the proposed project area would likely continue as planned in the SCAG 2020-2045 RTP/SCS. The planned developments would be required to complete their own CEQA clearance and identify property acquisitions, structure demolition, and construction. No population growth beyond that already anticipated in the SCAG growth projections for the region and in local community plans would occur either directly or indirectly. Therefore, the No Project Alternative would have a less than significant impact during construction related to communities, population, and housing.

OPERATION

Less Than Significant Impact. Under the No Project Alternative, the light rail line between the K, E, D, and B Lines would not be constructed. Since the KNE light rail would not be constructed as identified in the SCAG 2020-2045 RTP/SCS, the projected population and employment growth that would be supported by KNE may be more limited with reduced transit access. Therefore, the No Project Alternative would have a less than significant impact during operation related to communities, population, and housing.

5.5.2.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

CONSTRUCTION

Less Than Significant Impact. Under the No Project Alternative, the light rail extension between the E, D, and B Lines would not be constructed. The potential that other development, consistent with local plans, would affect historical, archaeological or paleontological resources during construction is determined by a variety of factors, including the type of development that is proposed. Ground-disturbing development would have the potential to impact sensitive archaeological and paleontological resources. Any planned developments would be required to complete their own independent environmental review and identify appropriate impacts and mitigations related to cultural and paleontological resources. Therefore, the No Project Alternative would have a less than significant impact during construction related to cultural and paleontological resources.

OPERATION

No Impact. Under the No Project Alternative, a light rail extension between the K, E, D, and B Lines would not operate. Although planned development in the area is likely to continue, potential impacts to cultural or paleontological resources are more likely to occur during the construction phase with demolition or ground-disturbing activities as discussed above rather than during operation. Therefore, the No Project Alternative would have no impact during operation related to cultural and paleontological resources.

5.5.2.6 ENERGY

CONSTRUCTION

Less Than Significant Impact. The No Project Alternative would not construct a new light rail line connecting the K, E, D, and B Lines; however, construction activities associated with other planned developments in the region would occur that have the potential to increase energy consumption. Other planned developments would be required to complete their own assessment of energy impacts and develop appropriate mitigation. Therefore, the No Project Alternative would have a less than significant impact during construction related to energy.

OPERATION

Less Than Significant Impact. Under the No Project Alternative, new sources of energy consumption would be introduced with the developments planned for the region. Due to the lack of light rail connecting the K, E, D, and B Lines, the No Project Alternative would not contribute to a regional VMT reduction; therefore, it would not decrease the consumption of energy used by private automobile trips that would have shifted to light rail as assumed in the 2020-2045 SCAG RTP/SCS. Therefore, the No Project Alternative would have a less than significant impact during operation related to energy since the energy reduction is less than would be anticipated with KNE operation.

5.5.2.7 GEOLOGY AND SOILS

CONSTRUCTION

Less Than Significant Impact. The No Project Alternative would not construct a new light rail line between the K, E, D, and B Lines. However, other planned development in the area could result in ground-disturbing activities and would have the potential to impact geology and soils. Impacts related to geology, soils, seismicity, and mineral resources are generally site-specific and localized. Projected future development would also be required to comply with all applicable standards, requirements, and guidance. Any planned developments would be required to complete their own independent environmental review and identify appropriate impacts and mitigations related to geology and soils. Therefore, the No Project Alternative would have a less than significant impact during construction related to geology and soils.

OPERATION

No Impact. The No Project Alternative would not operate a new light rail line between the K, E, D, and B Lines. The potential for impacts to geology and soils are more likely during construction of other development in the region than operation of the project. Therefore, the No Project Alternative would have no impact during operation related to geology and soils.

5.5.2.8 GREENHOUSE GAS EMISSIONS

CONSTRUCTION

Less Than Significant Impact. The No Project Alternative would not construct a new light rail line connecting the K, E, D, and B Lines. However, construction activities associated with other planned

developments in the region would occur that have the potential to increase greenhouse gas (GHG) emissions or conflict with applicable plans. Other planned developments would be required to complete their own assessment of greenhouse gas emissions and develop appropriate mitigation. Therefore, the No Project Alternative would have a less than significant impact during construction related to GHG emissions.

OPERATION

Significant and Unavoidable Impact. The No Project Alternative would not involve operation of a light rail extension between the K, E, D, and B Lines. However, the No Project Alternative would not be consistent with the 2020-2045 SCAG RTP/SCS or California's goal to increase mass transit under Assembly Bill 32. It would not decrease the VMT associated with private automobile trips that would have shifted to light rail as assumed in the 2020-2045 SCAG RTP/SCS. Therefore, the No Project Alternative would have a significant and unavoidable impact during operation related to GHG emissions.

5.5.2.9 GROWTH INDUCING IMPACTS

CONSTRUCTION

No Impact. Under the No Project Alternative, the light rail extension connecting the K, E, D, and B Lines would not be constructed. Development is anticipated to continue in the region consistent with the SCAG-adopted growth projections. The No Project Alternative would not result in unanticipated population growth or economic growth. Therefore, the No Project Alternative would have no impact during construction related to growth inducing impacts.

OPERATION

Less than Significant Impact. While development is anticipated to continue in the region consistent with SCAG-adopted growth projections, the No Project Alternative could limit alternatives to automobile travel; and limit transit choices for residents, visitors, and employees in the vicinity of the planned KNE alignments. However, other transit and transportation improvements in the region would be implemented and completed, which would accommodate forecasted growth and development consistent with local and regional plans across the region. Any projected future development would be approved solely at the discretion of the Cities of Los Angeles and West Hollywood and would be subject to all applicable requirements and regulations of local jurisdictions. It is anticipated that any potential growth inducing impacts would be addressed and mitigated by restrictions imposed by local jurisdictions. Changes in demographics associated with new development opportunities are anticipated to be consistent with the SCAG-adopted growth projections, which are based on the general plan land use designations of the Cities of Los Angeles and West Hollywood. Indirect economic growth is not anticipated from the No Project Alternative. Therefore, the No Project Alternative would have a less than significant impact during operation related to growth inducing impacts.

5.5.2.10 HAZARDS AND HAZARDOUS MATERIALS

CONSTRUCTION

Less Than Significant Impact. The No Project Alternative would not construct a new light rail line connecting the K, E, D, and B Lines but other planned development is anticipated to continue in the region. The construction of individual planned developments or projects may require the transport or storage of hazardous materials, ground disturbance or excavation that could encounter contaminated groundwater or soil, and demolition of existing structures that could release hazardous materials depending on the type and location of the development. Any planned developments would be required to complete their own independent environmental review and identify appropriate impacts and mitigations related to hazards and hazardous materials. Therefore, the No Project Alternative would have a less than significant impact during construction related to hazards and hazardous materials.

OPERATION

No Impact. The No Project Alternative would not operate a new light rail line connecting the K, E, D, and B Lines but other planned development is anticipated to continue in the region. Any ground disturbance or use of hazardous materials would most likely be associated with the construction phase of other developments or projects and would not pose a risk during operation. Therefore, the No Project Alternative would have no impact during operation related to hazards and hazardous materials.

5.5.2.11 HYDROLOGY AND WATER QUALITY

CONSTRUCTION

Less Than Significant Impact. The No Project Alternative would not construct a new light rail line connecting the K, E, D, and B Lines. Other planned developments and projects are anticipated to continue in the region and have the potential to result in impacts to surface or groundwater resources, and existing drainage facilities. Any planned developments would be required to complete their own independent environmental review and identify appropriate impacts and mitigations related to hydrology and water quality. Therefore, the No Project Alternative would have a less than significant impact during construction related to hydrology and water quality.

OPERATION

Less Than Significant Impact. The No Project Alternative would not operate a new light rail line connecting the K, E, D, and B Lines. Other planned developments and project operations may have the potential to introduce new pollutants to surface or groundwater, increase in impervious surfaces, or impact existing drainage patterns and runoff quantities. Any planned developments would be required to complete their own independent environmental review and identify appropriate impacts and mitigations related to hydrology and water quality. Therefore, the No Project Alternative would have a less than significant impact during operation related to hydrology and water quality.

5.5.2.12 LAND USE AND PLANNING

CONSTRUCTION

No Impact. Under the No Project Alternative, the light rail between the K, E, D, and B Lines would not be constructed. Development in the proposed project area would be likely to continue as planned in the SCAG 2020-2045 RTP/SCS, informed by the City of Los Angeles and City of West Hollywood General Plans. Therefore, the No Project Alternative would have no impact during construction related to land use and planning.

OPERATION

Significant and Unavoidable Impact. The No Project Alternative would not operate a new transit line connecting the K, E, D, and B Lines and therefore would not be consistent with the 2020-2045 SCAG RTP/SCS, which includes KNE. Therefore, the No Project Alternative would have a significant and unavoidable impact during operation related to land use and planning.

5.5.2.13 NOISE AND VIBRATION

CONSTRUCTION

Less than Significant Impact. The No Project Alternative would not construct a new light rail line connecting the K, E, D, and B Lines. It is anticipated that planned development will occur in the vicinity, and the general levels of noise and vibration are anticipated to be similar to existing conditions as the regular construction of similar-scale development that has occurred in the past would continue. It is anticipated these other projects would adhere to local noise ordinances during construction. Any planned developments would be required to complete their own independent environmental review and identify appropriate impacts and mitigations related to noise and vibration. Therefore, the No Project Alternative would have a less than significant impact during construction related to noise and vibration.

OPERATION

Less than Significant Impact. The No Project Alternative would not operate a new light rail line between the K, E, D, and B Lines. The existing transportation network and land use developments would continue to operate and generate operational noise, and the transportation improvements identified in Section 5.4.1 would increase the ambient noise and vibration. Therefore, the No Project Alternative would have a less than significant impact during operation related to noise and vibration.

5.5.2.14 PUBLIC SERVICES AND RECREATION

CONSTRUCTION

Less than Significant Impact. The No Project Alternative would not construct a new light rail line connecting the K, E, D, and B Lines. It is anticipated that the planned development in the vicinity will be consistent with local land use plans, community/specific plans, and general plans. Future development in the area would be subject to a discretionary review process that would ensure that developments are consistent with the goals and policies of the City of Los Angeles and the City of West Hollywood. Therefore, the No Project Alternative would have a less than significant impact during construction related to public services.

OPERATION

Less than Significant Impact. The No Project Alternative would not operate a new light rail line between the K, E, D, and B Lines. It is anticipated that the planned development in the vicinity will be consistent with local land use plans, community/specific plans, and general plans. Future development in the area would be subject to a discretionary review process that would ensure that developments are consistent with the goals and policies of the City of Los Angeles and the City of West Hollywood. The expected increase in regional traffic congestion could result in reduced emergency service response times. However, emergency service dispatch has real-time traffic conditions, so the potential for emergency service response delay is small. Therefore, the No Project Alternative would have a less than significant impact during operation related to public services.

5.5.2.15 TRANSPORTATION

CONSTRUCTION

Less than Significant Impact. The No Project Alternative would not construct a new light rail line connecting the K, E, D, and B Lines. Other planned developments and projects in the region are anticipated to follow local guidance and regulations during construction activities. As a result, they would not be inconsistent with applicable plans, ordinances, or policy. The construction of other planned developments and projects in the vicinity have the potential to increase vehicle trips, create hazards, or affect emergency access. Any planned developments or projects would be required to complete their own independent environmental review and identify appropriate impacts and mitigations related to transportation. Therefore, the No Project Alternative would have a less than significant impact during construction related to transportation.

OPERATION

Significant and Unavoidable Impact. Under the No Project Alternative, a light rail line connecting the K, E, D, and B Lines will not be introduced, although other planned transportation improvements identified in the SCAG 2020-2045 RTP/SCS are anticipated to be complete. The completion of developments and other transportation projects have the potential to increase vehicle trips, create hazards, or affect emergency access. In addition, the No Project Alternative would not be consistent with the 2020-2045 SCAG RTP/SCS, which includes KNE. Therefore, the No Project Alternative would have a significant and unavoidable impact during operation related to transportation.

5.5.2.16 TRIBAL CULTURAL RESOURCES

CONSTRUCTION

Less than Significant Impact. Under the No Project Alternative, a light rail line connecting the K, E, D, and B Lines would not be constructed. The potential that other development, consistent with local plans, would affect tribal cultural resources during construction is determined by a variety of factors, including the type of development that is proposed. Ground-disturbing development would have the potential to impact sensitive tribal resources. Any planned developments would be required to complete their own independent environmental review and identify appropriate impacts and mitigations related to tribal

resources as well as complete tribal coordination. Therefore, the No Project Alternative would have a less than significant impact during construction related to tribal cultural resources.

OPERATION

No Impact. Under the No Project Alternative, a light rail line connecting the K, E, D, and B Lines would not be constructed. Although planned development in the area is likely to continue, potential impacts to cultural or paleontological resources are more likely to occur during the construction phase with demolition or ground-disturbing activities, as discussed above, rather than during operation. Therefore, the No Project Alternative would have no impact during operation related to tribal cultural resources.

5.5.2.17 UTILITIES AND SERVICE SYSTEMS

CONSTRUCTION

Less than Significant Impact. The No Project Alternative would not construct a light rail line connecting the K, E, D, and B Lines. However, construction activities associated with other planned developments in the region would occur that have the potential to increase demand for utilities. Other planned developments would be required to complete their own assessment of utility impacts and develop appropriate mitigation. Therefore, the No Project Alternative would have a less than significant impact during construction related to utilities and service systems.

OPERATION

Less than Significant Impact. The No Project Alternative would not operate a new light rail line connecting the K, E, D, and B Lines. However, the completion of other planned developments has the potential to increase demand for utilities. Other planned developments would be required to complete their own assessment of utility impacts and develop appropriate mitigation. Therefore, the No Project Alternative would have a less than significant impact during operation related to utilities and service systems.

5.5.3 HIGH FREQUENCY BUS ALTERNATIVE

The following sections discuss the construction and operational impacts of the HFB Alternative.

5.5.3.1 AESTHETICS

CONSTRUCTION

Less than Significant Impact. Construction for the HFB Alternative would not require intensive activity that would affect scenic resources or state scenic highways, or conflict with local land use plans regarding scenic quality. Construction equipment, vehicles, signs, staging, and personnel would present temporary disruptive visual elements, but construction activities are temporary in nature. Construction activities are not anticipated to result in a substantial source of light or create glare. Therefore, the HFB Alternative would have a less than significant impact during construction related to aesthetics.

OPERATION

Less than Significant Impact. Operation of HFB Alternative would involve additional buses running within the existing transportation network and would not impact scenic resources or state scenic highways, conflict with local land use plans regarding scenic quality, or create a source of glare. Therefore, the HFB Alternative would have a less than significant impact during operation related to aesthetics.

5.5.3.2 AIR QUALITY

CONSTRUCTION

Less than Significant Impact. Construction of the HFB Alternative would require minor changes to the roadway, such as restriping or curb extensions, which would require the use of a small number of construction vehicles. Truck haul trips would be minimal. Construction would occur for a short duration. Overall, construction would generate minimal pollutants and emissions and would not conflict with air quality plans. Therefore, the HFB Alternative would have a less than significant impact during construction related to air quality.

OPERATION

Less than Significant Impact. As part of its initiative to minimize the environmental consequences of its operations, Metro has committed to implementing a cleaner fleet of buses and service vehicles that reduce air pollutants. On July 27, 2017, the Metro Board unanimously voted to transition the entire Metro bus fleet to zero-emission vehicles by 2030. The HFB Alternative would not interfere with Metro's efforts to reduce its systemwide air pollutant emissions and would not conflict with implementation of the Air Quality Management Plan. Although this alternative is not an extension of the light rail line, it would nevertheless provide a new transit option providing VMT and air quality benefits. In this way, the alternative remains consistent with the 2020-2045 SCAG RTP/SCS, although to a lesser extent than the KNE Fairfax Alignment. Therefore, the HFB Alternative would have a less than significant impact during operation related to air quality.

5.5.3.3 BIOLOGICAL RESOURCES

CONSTRUCTION

Less than Significant Impact. Construction of the HFB Alternative would not require the removal of vegetation and would not result in a potential to impact any special-status species of plants or wildlife directly or indirectly. There would not be a potential to adversely affect riparian habitats and wetlands because construction activities would not be located near riparian habitats or wetlands. Construction of this alternative would not conflict with applicable local regulations protecting biological resources. Therefore, the HFB Alternative would have a less than significant impact during construction related to biological resources.

OPERATION

Less than Significant Impact. Operation of the HFB Alternative would involve additional buses running within the existing transportation network, and the existing conditions would largely remain the same. There would not be a potential to impact any special-status species directly or indirectly. Therefore, the HFB Alternative would have a less than significant impact during operation related to biological resources.

5.5.3.4 COMMUNITIES, POPULATION, AND HOUSING

CONSTRUCTION

Less than Significant Impact. Construction of the HFB Alternative would not induce substantial unplanned population growth, either directly or indirectly. Construction activities would not require acquisition of residential parcels and therefore would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. Therefore, the HFB Alternative would have a less than significant impact during construction related to communities, population, and housing.

OPERATION

Less than Significant Impact. Operation of the HFB Alternative would not induce substantial unplanned population growth, either directly or indirectly. Operation would not require acquisition of residential parcels, would not displace substantial numbers of existing people or housing, and would not necessitate construction of replacement housing elsewhere. Therefore, the HFB Alternative would have a less than significant impact during operation related to communities, population, and housing.

5.5.3.5 CULTURAL AND PALEONTOLOGICAL RESOURCES

CONSTRUCTION

Less than Significant Impact. Though historical resources have been identified within the alignment resource study area (RSA), construction activities associated with the HFB Alternative would not directly impact historical resources. Construction would not include property acquisitions or demolition of historical resources. Construction would not require excavation and there would not be a potential to result in a change in the significance of a unique archaeological resource or disturb any human remains. Additionally, construction would not directly or indirectly destroy a unique paleontological resource, site, or unique geologic feature. Therefore, HFB Alternative would have a less than significant impact during construction related to cultural and paleontological resources.

OPERATION

Less than Significant Impact. Operation of the HFB Alternative would not include ground-disturbing activities and would not have the potential to impact historical resources, result in a change in the significance of a unique archaeological resource, or disturb any human remains. Additionally, operation would not directly or indirectly destroy a unique paleontological resource, site, or unique geologic feature. Therefore, the HFB Alternative would have a less than significant impact during operation related to cultural and paleontological resources.

5.5.3.6 ENERGY

CONSTRUCTION

Less than Significant Impact. Construction of the HFB Alternative would primarily use diesel fuel for construction vehicles and equipment. Construction activities would be minimal, and would not result in wasteful, inefficient, or unnecessary consumption of energy resources. Construction would not conflict with or obstruct state or local plans for renewable energy or energy efficiency. Therefore, the HFB Alternative would have a less than significant impact during construction related to energy.

OPERATION

Less than Significant Impact. Operation of the HFB Alternative would consume energy for the buses and would also indirectly change regional energy consumption through changes in regional VMT. There would not be a wasteful or inefficient use of energy resources. However, the reduction of VMT and associated regional transportation energy efficiency improvements with this alternative would be lower than for the KNE Fairfax Alignment due to lower anticipated ridership. Therefore, the HFB Alternative would have a less than significant impact during operation related to energy.

5.5.3.7 GEOLOGY AND SOILS

CONSTRUCTION

Less than Significant Impact. Construction for the HFB Alternative would not require excavation and therefore there would be no potential to result in impacts related to earthquake faults, soil erosion, unstable soils, or expansive soils. The alignment is located in a relatively flat, developed urban area and construction would not destroy, permanently cover, or adversely alter any unique or prominent geologic or topographic features. Therefore, the HFB Alternative would have a less than significant impact during construction related to geology and soils.

OPERATION

Less than Significant Impact. Operation of the HFB Alternative would involve additional buses running within the existing transportation network. The existing roadways are built to handle the loads of an operating transit bus and there would be no potential to result in impacts related to soil and seismic hazards. Additionally, there would be no subsurface disturbance during operation. Therefore, the HFB Alternative would have a less than significant impact during operation related to geology and soils.

5.5.3.8 GREENHOUSE GAS EMISSIONS

CONSTRUCTION

Less than Significant Impact. Construction of the HFB Alternative would require minor changes to the roadway, such as restriping or curb extensions, which would require the use of a small number of construction vehicles. Truck haul trips would be minimal. Construction would occur for a short duration. Overall, construction would generate very minimal emissions. Therefore, the HFB Alternative would have a less than significant impact during construction related to GHG emissions.

OPERATION

Less than Significant Impact. As discussed in Section 5.5.3.2, Metro is transitioning the Metro bus fleet to zero-emission vehicles by 2030. The HFB Alternative would not generate substantial GHG emissions and would not conflict with applicable plans. Although this alternative is not an extension of the light rail line, it would nevertheless provide a new transit option. In this way, the alternative remains consistent with the 2020-2045 SCAG RTP/SCS, although to a lesser extent than the KNE Fairfax Alignment. Therefore, the HFB Alternative would have a less than significant impact during operation related to GHG emissions.

5.5.3.9 GROWTH INDUCING IMPACTS

CONSTRUCTION

No Impact. Construction activity associated with the HFB Alternative would draw construction workers from across the greater metropolitan area, though to a lesser extent than construction of LRT. These workers would commute to their work sites, and it is unlikely that people would move from their homes because of the temporary construction activity. Unanticipated population growth is not expected to result from construction nor is the construction activity likely to drive the existing station RSA population to relocate. Construction activity is unlikely to temporarily hinder economic development. Therefore, the HFB Alternative would have no impact during construction related to growth inducing impacts.

OPERATION

No Impact. Operation of the HFB Alternative is not expected to generate significant unanticipated employment or economic growth. Operation of this alternative would lead to improved mobility options for those living or working within the RSAs and, but it is unlikely that operation would spark unanticipated economic development or that the economic development would diminish environmental quality. Therefore, the HFB Alternative would have no impact during operation related to growth inducing impacts.

5.5.3.10 HAZARDS AND HAZARDOUS MATERIALS

CONSTRUCTION

Less than Significant Impact. Construction of the HFB Alternative would not include ground-disturbing activities, and the potential of encountering contaminated groundwater or soil would be low. Construction could temporarily increase the regional transport, use, and disposal of hazardous materials and petroleum products, such as fuels and paints, though to a lesser extent than construction of the KNE Fairfax Alignment. Construction would comply with existing federal, state, and local regulations pertaining to routine transport, use, or disposal of hazardous materials. There would not be any demolition of existing structures that could release hazardous materials, nor would there be impacts on potential Recognized Environmental Conditions. Therefore, the HFB Alternative would have a less than significant impact during construction related to hazards and hazardous materials.

OPERATION

Less than Significant Impact. Operation of the HFB Alternative would involve additional buses running within the existing transportation network. There would not be any subsurface ground disturbance, and use of hazardous materials would be limited to typical materials associated with bus operation and maintenance. Therefore, the HFB Alternative would have a less than significant impact during operation related to hazards and hazardous materials.

5.5.3.11 HYDROLOGY AND WATER QUALITY

CONSTRUCTION

Less than Significant Impact. Construction of the HFB Alternative would require minor changes to the roadway, and there would not be any construction activities that could result in impacts to surface or groundwater resources. Any changes to curbs and gutters or existing drainage facilities would comply with all regulatory requirements and employ best management practices (BMPs) during construction and would not substantially alter drainage patterns. There are no rivers or streams within this alignment, and construction would not increase the rate or amount of surface runoff in a manner that would result in flooding or that would exceed the capacity of existing or planned stormwater drainage systems. Therefore, the HFB Alternative would have a less than significant impact during construction related to hydrology and water quality.

OPERATION

Less than Significant Impact. Operation of the HFB Alternative would not result in impacts to surface or groundwater resources. This alternative would be located within an existing roadway and would not result in a net increase in impervious surfaces. Any changes to curbs and gutters or existing drainage facilities would comply with all regulatory requirements and employ BMPs during construction and would not substantially alter drainage patterns. There are no rivers or streams within this alignment, and operation of buses would not increase the rate or amount of surface runoff in a manner that would result in flooding or that would exceed the capacity of existing or planned stormwater drainage systems. Therefore, the HFB Alternative would have a less than significant impact during operation related to hydrology and water quality.

5.5.3.12 LAND USE AND PLANNING

CONSTRUCTION

Less than Significant Impact. During construction, the HFB Alternative would primarily require physical changes to roadways through the City of Los Angeles. This could include temporary road closures shorter in duration than those associated with the KNE Fairfax Alignment. However, construction efforts would generally be limited to restriping and curb extensions, which do not typically last for more than a week in a single location and are localized and are thus unlikely to divide an established community or conflict with local plans and policies. Therefore, the HFB Alternative would have a less than significant impact during construction related to land use and planning.

OPERATION

Less than Significant Impact. Operation of the HFB Alternative would not result in a physical division of a community. This alternative would provide a high-frequency transit line and is generally consistent with local plans' goals for circulation improvements, community access and development, and air pollutant emissions and GHG reductions, but would provide fewer circulation improvements and emission reductions than the KNE Fairfax Alignment. Therefore, the HFB Alternative would have a less than significant impact during operation related to land use and planning.

5.5.3.13 NOISE AND VIBRATION

CONSTRUCTION

Less than Significant Impact. Construction for the HFB Alternative would not require intensive activity, and the equipment would be minimal compared to that required for the KNE Fairfax Alignment, likely including equipment such as paving machines and rollers. The alignment would be along major arterials and there would not be exceedances in ambient noise levels or vibration impacts. Therefore, the HFB Alternative would have a less than significant impact during construction related to noise and vibration.

OPERATION

No Impact. Operation of the HFB Alternative would involve additional buses running within the existing transportation network and would not result in substantial increases in ambient noise levels or generation of vibration impacts that exceed thresholds. Therefore, the HFB Alternative would have a less than significant impact during operation related to noise and vibration.

5.5.3.14 PUBLIC SERVICES AND RECREATION

CONSTRUCTION

Less than Significant Impact. Construction of the HFB Alternative would be located within the roadway, and would not directly impact schools, parks, recreational, or governmental facilities, or emergency services. Construction may require lanes closures, but it would be unlikely that the entire roadway would need to be closed, and access to public facilities would not be impacted. Construction would not include the construction of recreational facilities or require the expansion of existing recreational facilities. Therefore, the HFB Alternative would have a less than significant impact during construction related to public services and recreation.

OPERATION

Less than Significant Impact. Operation of the HFB Alternative would involve additional buses running within the existing transportation network. Acquisition of public facilities would not be required and there would not otherwise be any direct impacts to public facilities. This alternative also would not induce unplanned population increases that would impact the demand for public facilities. The HFB Alternative is anticipated to be less effective than the KNE Fairfax Alignment in reducing growth of regional traffic congestion, which in turn could result in reduced emergency service response times. However, emergency service dispatch has real-time traffic conditions, so the potential for emergency service

response delay is small. Therefore, the HFB Alternative would have a less than significant impact during operation related to public services and recreation.

5.5.3.15 TRANSPORTATION

CONSTRUCTION

Less than Significant Impact. Construction of the HFB Alternative would require minor changes to the roadway, such as restriping or curb extensions, which would affect circulation. However, the changes would not result an increase in hazards or result in inadequate emergency access. Construction of this alternative would not increase VMT. Therefore, the HFB Alternative would have a less than significant impact during construction related to transportation.

OPERATION

Less than Significant Impact. Operation of the HFB Alternative would involve additional buses running within the existing transportation network, which would not result in impacts related to VMT, circulation, or hazards. The KNE Fairfax Alignment is included within Metro's Long Range Transportation Plan, and although the HFB Alternative is not an extension of the light rail line, it would nevertheless provide a transit option connecting the existing K, E, D, and B Lines, with stops along the way. In this way, this alternative would fulfill the intent of the applicable transportation plans, although to a lesser extent than the KNE Fairfax Alignment. Therefore, the HFB Alternative would have a less than significant impact during operation related to transportation.

5.5.3.16 TRIBAL CULTURAL RESOURCES

CONSTRUCTION

Less than Significant Impact. Construction for the HFB Alternative would not require excavation and therefore there would not be a potential to result in impacts related to disturbing unknown tribal cultural resources (TCRs). Therefore, the HFB Alternative would have a less than significant impact during construction related to TCRs.

OPERATION

No Impact. Operation of the HFB Alternative would involve additional buses running within the existing transportation network and would not include ground-disturbing activities. There would not be a potential to disturb any buried TCRs, nor would it alter any existing setting that would impact a TCR. Therefore, the HFB Alternative would have no impact during operation related to TCRs.

5.5.3.17 UTILITIES AND SERVICE SYSTEMS

CONSTRUCTION

Less than Significant Impact. Construction of the HFB Alternative would require minor changes to the roadway, and likely would not require any utility relocations or disruption of services. Construction activities would not substantially increase water usage or require the expansion of any existing

wastewater facilities. Therefore, the HFB Alternative would have a less than significant impact during construction related to utilities and service systems.

OPERATION

Less than Significant Impact. Operation of the HFB Alternative would not result in a significant long-term, permanent source of water use, wastewater, or solid waste, and would not require coordination with third-party utility owners. In 2017, the Metro Board selected to transition the entire Metro bus fleet to zero-emission vehicles by 2030. This alternative would not substantially increase demand for natural gas and would not require the expansion of existing facilities. Therefore, the HFB Alternative would have a less than significant impact during operation related to utilities and service systems.

5.6 SUMMARY TABLE OF IMPACTS

Table 5-4 summarizes the level of impacts of the KNE Fairfax Alignment (proposed project), the No Project Alternative, and the HFB Alternative. For comparison, the table also includes the other two KNE light rail alignments (KNE San Vicente–Fairfax Alignment and KNE La Brea Alignment) evaluated in detail in Chapter 3. The No Project Alternative would not have significant and unavoidable impacts during construction. It would have significant and unavoidable impacts during operation for air quality, greenhouse gas emissions, land use and planning, and transportation. Although the HFB Alternative does not have the same VMT reduction, air quality improvements, GHG reductions, and energy savings benefits as the KNE Fairfax Alignment, this alternative would not result in significant and unavoidable impacts to environmental resources during construction or operation. The KNE Fairfax Alignment (proposed project), as well as the KNE San Vicente–Fairfax and KNE La Brea Alignments, would all result in significant and unavoidable impacts for cultural resources and paleontological resources during construction. The KNE light rail alignments do not have significant and unavoidable impacts during operation.

TABLE 5-4. COMPARISON OF IMPACT SIGNIFICANCE CONCLUSIONS

		RAIL ALIGNMENTS AND FACILITIES					NO TRANSIT	BUS TRANSIT
		SAN VICENTE–FAIRFAX ALIGNMENT	FAIRFAX ALIGNMENT (PROPOSED PROJECT)	LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MSF REQUIREMENTS	NO PROJECT ALTERNATIVE	HIGH FREQUENCY BUS ALTERNATIVE
Aesthetics	Construction	LTS	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	LTS	LTS
Air Quality	Construction	LTS	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	**Significant and Unavoidable**	LTS
Biological Resources	Construction	LTS	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	No Impact	LTS
Communities, Population and Housing	Construction	LTS	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	LTS	LTS
Cultural Resources	Construction	**Significant and Unavoidable**	**Significant and Unavoidable**	**Significant and Unavoidable**	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	No Impact	No Impact	LTS
Paleontological Resources	Construction	**Significant and Unavoidable**	**Significant and Unavoidable**	**Significant and Unavoidable**	**Significant and Unavoidable**	LTS	LTS	LTS
	Operation	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact	LTS
Energy	Construction	LTS	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	LTS	LTS
Geology and Soils	Construction	LTS	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	No Impact	LTS
Greenhouse Gas Emissions	Construction	LTS	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	**Significant and Unavoidable**	LTS

		RAIL ALIGNMENTS AND FACILITIES					NO TRANSIT	BUS TRANSIT
		SAN VICENTE–FAIRFAX ALIGNMENT	FAIRFAX ALIGNMENT (PROPOSED PROJECT)	LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MSF REQUIREMENTS	NO PROJECT ALTERNATIVE	HIGH FREQUENCY BUS ALTERNATIVE
Growth Inducing Impacts	Construction	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
	Operation	LTS	LTS	LTS	LTS	No Impact	LTS	No Impact
Hazards and Hazardous Materials	Construction	LTS	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	No Impact	LTS
Hydrology and Water Quality	Construction	LTS	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	LTS	LTS
Land Use and Planning	Construction	LTS	LTS	LTS	LTS	LTS	No Impact	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	**Significant and Unavoidable**	LTS
Noise and Vibration	Construction	LTS	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	LTS	No Impact
Public Services and Recreation	Construction	LTS	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	LTS	LTS
Transportation	Construction	LTS	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	**Significant and Unavoidable**	LTS
Tribal Cultural Resources	Construction	LTS	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact	No Impact
Utilities and Service Systems	Construction	LTS	LTS	LTS	LTS	LTS	LTS	LTS
	Operation	LTS	LTS	LTS	LTS	LTS	LTS	LTS

Source: Connect Los Angeles Partners 2024
LTS = less than significant; MSF = maintenance and storage facility
Note 1: MSF is a required element of all rail alignments.
Note 2: The impact significance conclusions presented for the KNE San Vicente–Fairfax, Fairfax, and La Brea Alignments, the Hollywood Bowl Design Option, and MSF are summaries of the most conservative post-mitigation impact conclusions. Refer to Chapter 3 for all pre-mitigation impact conclusions and relevant mitigation measures for each environmental resource.

5.7 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA Guidelines Section 15126.6 (e)(2) requires that an "environmentally superior" alternative be identified. The environmentally superior alternative is the alternative that would be expected to generate the fewest adverse impacts. If the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

As shown in Table 5-4, the No Project Alternative would avoid the construction impacts identified for the KNE Fairfax Alignment, but it would have significant and unavoidable impacts during operation related to air quality, greenhouse gas emissions, transportation, and land use and planning. The HFB Alternative would not result in significant construction or operational impacts as identified for the KNE Fairfax Alignment. The KNE San Vicente–Fairfax and KNE La Brea Alignments would result in similar significant construction and operational impacts as the KNE Fairfax Alignment. Therefore, the HFB Alternative is the environmentally superior alternative. However, the HFB Alternative would not realize the same level of benefits as a light rail extension from reduction in VMT, air quality improvements, GHG emissions reduction, and energy savings that would result from the KNE Fairfax Alignment, as well as the KNE San Vicente–Fairfax and KNE La Brea Alignments.

Following the completion of the public comment period on the Draft EIR, Metro staff will prepare a recommendation for the Metro Board to consider in the selection of a Locally Preferred Alternative (LPA) based on findings from the Draft EIR, public comments made during the comment period, technical analysis, stakeholder input, and other factors such as project objectives, cost, and ridership. The Metro Board will vote at a public meeting to select an LPA.

CHAPTER 6 PUBLIC OUTREACH

6.1 INTRODUCTION

The Los Angeles County Metropolitan Transportation Authority (Metro) has implemented a comprehensive outreach program as part of the environmental review process for the K Line Northern Extension (KNE) Transit Corridor Project, which started with public scoping in Spring 2021. Summaries of public engagement efforts conducted in planning studies prior to initiation of California Environmental Quality Act (CEQA) scoping are included on the project website. Outreach specific to scoping is summarized in the project's Scoping Summary Report (Appendix 1-A). Metro continued outreach efforts as part of the development of this Draft Environmental Impact Report (EIR). These efforts are summarized in the 2022 Outreach Summary Report and 2023 Outreach Summary Report. This chapter provides an overview of the outreach efforts associated with this Draft EIR.

6.2 BACKGROUND

The project's history includes publication of the following documents: the 2009 *Crenshaw Transit Corridor Project Draft Environmental Impact Statement/Environmental Impact Report* (Metro 2009a), the 2009 *Wilshire/La Brea Light Rail Transit Extension Feasibility Study* (Metro 2009b), the 2009 *Westside Subway Extension Alternatives Analysis* (Metro 2009c), the 2018 *Crenshaw Northern Extension Feasibility/Alternatives Analysis Study* (Metro 2018), the 2020 *Crenshaw Northern Extension Advanced Alternatives Analysis Screening Study* (Metro 2020), the 2022 *Crenshaw Northern Extension Post-Scoping Alignment Refinement Evaluation* (Metro 2022a), and this 2024 Draft EIR. In 2022, Metro updated the name of the project from Crenshaw Northern Extension to K Line Northern Extension to reflect the opening of Metro's K Line.

6.3 PUBLIC OUTREACH 2021 – 2024

6.3.1 2021 EIR SCOPING

6.3.1.1 NOTICE OF PREPARATION

The scoping period for preparation of the Draft EIR began with publication of the Notice of Preparation (NOP) on April 15, 2021, and continued through May 28, 2021, for a 45-day public review period. Metro submitted the NOP to the State of California Office of Planning and Research State Clearinghouse. The NOP extended an invitation for public participation in the EIR scoping process and announced scheduled NOP scoping meetings.

6.3.1.2 2021 EIR SCOPING MEETINGS

Due to the COVID-19 pandemic and social-distancing requirements, Metro engaged the community through virtual scoping meetings via Zoom and accommodated diverse time slots to ensure accessibility for the public.

To encourage public involvement, meeting notices were posted on Metro's project website and were distributed electronically via the project's stakeholder database. In addition, approximately 130,000 notices were distributed to communities along the project corridor through social media advertisements, newspaper advertisements, and targeted outreach to specific stakeholder groups.

Metro held three NOP scoping meetings, as detailed in Table 6-1. The purpose of the virtual scoping meetings was to provide an overview of the project, an overview of the CEQA process, information on the project timeline for the environmental review period, and to receive comments on the scope of environmental analysis from agencies, stakeholders, and the public.

TABLE 6-1. 2021 VIRTUAL SCOPING MEETINGS

MEETING	DATE	TIME	PARTICIPANTS
Virtual Scoping Meeting 1	Thursday, April 29, 2021	11:30 a.m. – 1:30 p.m.	202
Virtual Scoping Meeting 2	Thursday, May 6, 2021	6:30 p.m. – 8:30 p.m.	143
Virtual Scoping Meeting 3	Saturday, May 8, 2021	10:00 a.m. – 12:00 p.m.	76
Total Participants			**421**
Total Comments Received During Scoping Period			**665**

Source: Connect Los Angeles Partners 2024

Over the 45-day public scoping period, interested parties were offered multiple avenues to provide input, including U.S. mail, email, voicemail, and live verbal comments during each of the scoping meetings, with Spanish and Russian translation services provided. This multi-pronged approach aimed to foster inclusivity and gather comprehensive feedback. Throughout the scoping period, 665 individual comments were received from agencies, stakeholders, and the public related to the project. Details on comments received, including comment sources, are included in Appendix 1-A, Scoping Summary Report.

Comments during the scoping process revealed the key themes listed below, which reflect community priorities and concerns:

- Expressions of support for specific alignments
- Higher costs associated with the San Vicente-Fairfax Alignment
- Importance of a favorable benefit-to-cost ratio in decision-making
- Importance of travel time in decision-making
- Urgency for project acceleration
- Preferences for underground construction
- Concerns for green space preservation
- Concerns regarding property devaluation
- Expectations for well-placed transit hubs
- Increasing job accessibility
- Environmental benefits

- Concerns regarding traffic issues during construction
- Concerns regarding the project's operational impacts

These themes are representative of the diverse perspectives and priorities expressed by the community and provided valuable insights for the subsequent stages of the project's environmental impact analysis.

6.4 COMMUNITY MEETINGS

6.4.1 2022 COMMUNITY MEETINGS

In June 2022, Metro hosted two virtual community update meetings conducted via Zoom to provide an update on work completed since the scoping meetings in early 2021. Metro staff presented a comprehensive overview, including project status, timelines, potential routes, and major activity centers, and highlighted project changes made based on initial scoping meetings. The virtual community meetings concluded with public comment, and an invitation for community members to provide further input as part of an online survey and StoryMap. Preceding the meetings, a three-week outreach effort focused on specific zip codes, including the delivery of 10,000 flyers, updates at neighborhood council meetings, email campaigns, and phone outreach to over 350 businesses. Table 6-2 summarizes 2022 public outreach meetings.

TABLE 6-2. 2022 PUBLIC OUTREACH MEETINGS AND ONLINE SURVEY

MEETING	JUNE 2022 COMMUNITY UPDATE MEETINGS	
Date	Thursday, June 16, 2022	Tuesday, June 21, 2022
Time	12:00 p.m. – 1:00 p.m.	6:00 p.m. – 7:00 p.m.
Location	Virtual	Virtual
Participants	103	133
Questions and Comments during Meetings	58	91
Online Survey Responses	176	
Questions and Comments (total)	325	

Source: Connect Los Angeles Partners 2024

More than 300 comments were received from meeting participants and as part of the online survey and StoryMap (GIS based website). Comments provided reflected many of the same themes expressed in scoping comments, including alignment preferences, station area preferences and access locations, project costs, and construction timeline. A summary of all information shared as part of the 2022 community meetings and the comments received is included in the 2022 Outreach Summary Report available on the project website (Metro 2022a). An archived version of the StoryMap is available at https://storymaps.arcgis.com/stories/3c0d107315184499a20818195fbeedbb.

6.4.2 2023 OUTREACH

In September 2023, Metro hosted three community update meetings to inform stakeholders on project status, share new details related to project ridership and environmental documentation progress, and gather feedback. Two meetings were held in person and one meeting was held virtually to allow for engagement in different neighborhoods along the project alignments, as well as different days and times to encourage participation. The virtual meeting included a 30-minute PowerPoint presentation followed by 60 minutes of public comments and questions. The presentation included project status, proposed alignments, ridership overview, and next steps. The in-person community meetings were conducted in an open house format without a presentation. Presentation boards illustrated project information, and project staff were available to answer questions. Translation services were provided at the events, ensuring accessibility and community involvement. Table 6-3 summarizes the 2023 public outreach meetings.

TABLE 6-3. 2023 PUBLIC OUTREACH MEETINGS

MEETING	SEPTEMBER 2023 COMMUNITY UPDATE MEETINGS		
Date	Tuesday, September 19, 2023	Saturday, September 23, 2023	Tuesday, September 26, 2023
Time	12:00 p.m. – 1:30 p.m.	10:00 a.m. – 12:00 p.m.	5:00 p.m. – 7:00 p.m.
Location	Virtual	Baldwin Hills Crenshaw Plaza Mall	West Hollywood Aquatics and Recreation Center
Participants	156	32	79
Questions and Comments (total)	140		

Source: Connect Los Angeles Partners 2024

In tandem with the community update meetings, Metro actively participated in various public events throughout the study area to further promote public engagement. Additional detail from the 2023 outreach meetings, as well as public events that have been attended and utilized as venues for project information sharing and outreach, is available in the 2023 Outreach Summary Report on the project website.

6.4.3 ONGOING PUBLIC OUTREACH

6.4.3.1 STAKEHOLDER DATABASE

An initial project database of stakeholder contact information was created at the inception of the project feasibility study phase in 2009. Since that time, the database has been maintained and expanded to include elected officials, such as local, regional, state, and federal representatives; department executives of city and regional agencies; academic institutions and schools; community-based organizations; chambers of commerce; major employers; utility companies; and other key stakeholder representatives and residents of the corridor communities.

Starting in 2021, Metro had approximately 550 community members on the mailing list. Since public scoping, the database has continued to expand as additional contacts were collected through stakeholder engagement. As of the end of June 2024, it includes over 1,100 people. Maintenance of the database is ongoing and is used to notify agency and organization contacts prior to the start of each meeting series or major announcement. New contacts are added when members of the public opt in to receive project communications by providing their contact information at public meetings or pop-up events. Similarly, new agency contacts are added as they participate in project meetings or as they become directly involved. Contacts are also added when inquiries are received through the helpline, project email, and online submission form.

6.4.3.2 ONLINE COMMUNICATION TOOLS

To keep stakeholders informed, a project website was developed and updated at every major project milestone, including prior to public meetings and as major project updates became available. The website features the latest project information, including fact sheets, project maps, presentations, display materials, video recordings of past meetings, and other collateral materials. The website was also used to provide public access to the StoryMap created to solicit input as part of the 2022 outreach meetings. The project StoryMap will help inform readers about the project, the alignments, potential station locations, the environmental process, and ways to submit comments and feedback. It will also include links to various project documents, including ridership and cost estimates, as well as outreach reports and summaries. The website is available at: www.metro.net/kne/.

6.4.3.3 NOTIFICATION AND PROJECT AWARENESS EFFORTS

A variety of notification and informational tools have been used for outreach to target audiences. Outreach methods included the following:

- Traditional methods
  - In-person and virtual meetings with the Cities of West Hollywood and Los Angeles and Los Angeles County, chambers of commerce, councils of governments, educational institutions, community stakeholder groups, agency staff, and elected officials
  - Direct mail notifications
  - Newspaper display ads (print and digital)
  - Pop-up or information tables at community events
- Public involvement opportunities
  - Public community meetings
  - Display of project materials at other Metro project community meetings
- Project communication tools
  - Project website and StoryMap (www.metro.net/kne/)
  - Project helpline at (213) 418-3093
  - Project fact sheet and FAQs

- Email notification/project email (klinenorth@metro.net)
- Social media
- Project videos

- Other targeted outreach
  - Text message campaigns
  - The Source, Metro's online publication (https://thesource.metro.net)
  - Earned media (social media, blogs, newspapers, other media)

These notification tools and outreach efforts were customized based on the type of community meetings and desired participation. A variety of informational documents were made available to the public, including project fact sheets, Metro systemwide fact sheets, meeting notices, electronic newsletters (eblasts), and other materials.

6.5 COMMENTS ON THIS DRAFT EIR

The Draft EIR is being made available for public review for a 30-day comment period starting on July 23, 2024, and concluding on August 22, 2024. The Draft EIR, along with other project information, is available online for review and download at Metro's project website at www.metro.net/kne/.

Hard copies of the Draft EIR (and electronic copies of the supporting technical reports) will also be available for public review at the following locations:

- Metro Headquarters, Dorothy Peyton Gray Transportation Library, One Gateway Plaza, Los Angeles, CA 90012
- Baldwin Hills Branch Library, 2906 S La Brea Avenue, Los Angeles, CA 90016
- Hyde Park Miriam Matthews Branch Library, 2205 W Florence Avenue, Los Angeles, CA 90043
- Angeles Mesa Branch Library, 2700 W 52nd Street, Los Angeles, CA 90043
- View Park Bebe Moore Campbell Library, 2854 W 54th Street, Los Angeles, CA 90043
- Washington Irving Branch Library, 4117 W Washington Boulevard, Los Angeles, CA 90018
- Jefferson - Vassie D. Wright Memorial Branch Library, 2211 W Jefferson Boulevard, Los Angeles, CA 90018
- Fairfax Branch Library, 161 S Gardner Street, Los Angeles, CA 90036
- Will & Ariel Durant Branch Library, 7140 W Sunset Boulevard, Los Angeles, CA 90046
- Frances Howard Goldwyn Hollywood Regional Branch, 1623 Ivar Avenue, Los Angeles, CA 90028
- West Hollywood Library, 625 N San Vicente Boulevard, West Hollywood, CA 90069
- Russian Language Public Library, 7362 Santa Monica Boulevard, West Hollywood, CA 90046
- Margaret Herrick Library, 333 S La Cienega Boulevard, Beverly Hills, CA 90211
- Inglewood Public Library, 101 W Manchester Boulevard, Inglewood, CA 90301

Metro is conducting three public hearings to present key findings on the Draft EIR and offer opportunities for the public to submit comments. Two public hearings will be in person and one hearing will be virtual. Table 6-4 lists the times and locations of each hearing. A court reporter will be present at each hearing to transcribe the proceedings. Consistent with CEQA, comments and questions provided at the hearings will not receive a response during the hearings but will be addressed within the Final EIR. Metro will provide the same information at each hearing. Notifications of this public review period have been published in the Los Angeles Daily News and La Opinion.

TABLE 6-4. PUBLIC REVIEW HEARINGS

DETAILS	HEARING 1	HEARING 2	HEARING 3
Date	Saturday, August 10, 2024	Tuesday, August 13, 2024	Thursday, August 15, 2024
Time	10:00 a.m. – 12:00 p.m.	6:00 – 8:00 p.m.	12:00 – 1:30 p.m.
Location	Susan Miller Dorsey Senior High School 3537 Farmdale Avenue Los Angeles, CA 90016	Pan Pacific Park Recreation Center 7600 Beverly Boulevard Los Angeles, CA 90036	Virtual: https://us02web.zoom.us/j/87336933668 Phone: 213.338.8477

Source: Connect Los Angeles Partners 2024

Comments on this Draft EIR can be provided at public hearings or sent via email, phone, or mail to the addresses shown in Table 6-5. All submitted comments on the Draft EIR must be received by August 22, 2024.

TABLE 6-5. PUBLIC REVIEW CONTACT INFORMATION FOR DRAFT EIR

MEDIA TYPE	MAILING ADDRESS/CONTACT INFORMATION
By mail	Roger Martin Project Manager Los Angeles County Metropolitan Transportation Authority One Gateway Plaza, Mail Stop 99-22-5 Los Angeles, CA 90012
By email	klinenorth@metro.net
By phone	213.418.3093

Source: Connect Los Angeles Partners 2024
EIR = Environmental Impact Report

All comments received during the Draft EIR public review period will be compiled and responded to as part of the Final EIR. If there are any questions regarding this notice, or how to review available documents, please contact Roger Martin at the mailing address above.

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CHAPTER 8 ABBREVIATIONS/ACRONYMS

ACRONYM	DEFINITION
AB	Assembly Bill
AB 32 Scoping Plan	Assembly Bill 32 Climate Change Scoping Plan
ACM	asbestos-containing material
ADL	aerially deposited lead
Advanced AA	Crenshaw Northern Extension Advanced Alternatives Analysis Screening Study
AF	acre-feet
APEFZ	Alquist-Priolo Earthquake Fault Zones
AQMP	Air Quality Management Plan
BERD	Built Environment Resources Directory
bgs	below ground surface
BMP	best management practice
BP	before present
BRT	bus rapid transit
BTU	British thermal unit
CAA	Clean Air Act
CAAP	Climate Action and Adaptation Plan
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Division of Occupational Safety and Health Administration
CalEEMod	California Emissions Estimator Model
CalGEM	California Geologic Energy Management Division
CALGreen	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
CalSTA	California State Transportation Agency
Caltrans	California Department of Transportation
CAPTI	Climate Action Plan for Transportation Infrastructure
CARB	California Air Resources Board

ACRONYM	DEFINITION
CBC	California Building Code
CCAA	California Clean Air Act
CCAP	Community Climate Action Plan
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH_4	methane
CNDDB	California Natural Diversity Database
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
Cortese	Hazardous Waste and Substance Sites List
CRHR	California Register of Historical Resources
CRMMP	Cultural Resources Monitoring and Mitigation Plan
CRPR	California Rare Plant Rank
CWA	Clean Water Act
CWC	California Water Code
dBA	A-weighted decibels
Division 16	Division 16 Maintenance Yard
DPR	Department of Parks and Recreation
DTSC	Department of Toxic Substances Control
DWR	California Department of Water Resources
EFC	Equity Focused Community

ACRONYM	DEFINITION
EIR	Environmental Impact Report
EMFAC	California Air Resources Board model for on-road vehicle emissions (EMission FACtor)
EO	Executive Order
ESA	Environmental Site Assessment
Expo	Metro E Line
F	Fahrenheit
Feasibility/AA Study	Crenshaw Northern Extension Feasibility/Alternatives Analysis Study
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FTA Guidance Manual	Federal Transit Administration 2018 Transit Noise and Vibration Impact Assessment Manual
GBN	ground-borne noise
GBV	ground-borne vibration
GHG	greenhouse gas
GWh	gigawatt-hour
GWP	global warming potential
HABS	Historic American Buildings Survey
HAER	Historic American Engineering Record
HALS	Historic American Landscape Survey
HCP	Habitat Conservation Plan
HDPE	high density polyethene
HFB	High Frequency Bus
HFC	hydrofluorocarbons
HistoricPlacesLA	Los Angeles Historic Resources Inventory
hp	horsepower
HPOZ	Historic Preservation Overlay Zone
HRT	heavy rail transit

ACRONYM	DEFINITION
I-10	Interstate 10
IGP	Industrial General National Pollutant Discharge Elimination System Permit
IPCC	Intergovernmental Panel on Climate Change
KNE	K Line Northern Extension
K_{rad}	radiation factor
kWh	kilowatt-hour
L_A	A-weighted ground-borne noise
LACDPW	Los Angeles County Department of Public Works
LACFCD	Los Angeles County Flood Control District
LACFD	Los Angeles County Fire Department
LACMA	Los Angeles County Museum of Art
LACSD	Los Angeles County Sanitation Districts
LADOT	Los Angeles Department of Transportation
LADRP	Los Angeles Department of Recreation and Parks
LADWP	Los Angeles Department of Water and Power
LAFD	Los Angeles Fire Department
LAHCM	Los Angeles Historic-Cultural Monument
LAMC	Los Angeles Municipal Code
LAPD	Los Angeles Police Department
LARWQCB	Los Angeles Regional Water Quality Control Board
LASAN	Los Angeles Bureau of Sanitation
LAUSD	Los Angeles Unified School District
LAX	Los Angeles International Airport
lb/MWhr	pounds per megawatt-hour
LBP	lead-based paint
L_{dn}	day-night noise level
LED	light-emitting diode
LEL	lower explosive limit

ACRONYM	DEFINITION
L_{eq}	equivalent noise level
LEV	low-emission vehicle
LEV III GHG	Low-Emission Vehicle III Regulation for Greenhouse Gases
LID	Low-Impact Development
Los Angeles Basin Plan	Water Quality Control Plan: Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties
LPA	Locally Preferred Alternative
LRA	Local Responsibility Area
LRT	light rail transit
LRTP	Long Range Transportation Plan
LRV	light rail vehicle
LST	Localized Significance Threshold
LTS	less than significant
LU	landscape unit
Ma	million years ago
MBSSP	Moving Beyond Sustainability Strategic Plan
MBTA	Migratory Bird Treaty Act
MDE	maximum design earthquake
Metro	Los Angeles County Metropolitan Transportation Authority
Metro Board	Los Angeles County Metropolitan Transportation Authority Board of Directors
MGD	million gallons per day
MLD	most likely descendant
MM	mitigation measure
MMBtu	Million British thermal units
MMT	million metric tons
MPO	Metropolitan Planning Organization
MRDC	Metro Rail Design Criteria
MRZ	Mineral Resource Zone
MS4	Municipal Separate Storm Sewer System

ACRONYM	DEFINITION
MSF	maintenance and storage facility
$MTCO_2e$	metric tons of carbon dioxide equivalent
MUTCD	Manual on Uniform Traffic Control Devices
MWD	Metropolitan Water District
n.d.	no date
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NM	not measured
NO	nitric oxide
NO_2	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NOP	Notice of Preparation
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
O&M	operations and maintenance
O_3	ozone
ODE	operating design earthquake
OFFROAD	California Air Resources Board model for off-road vehicle and equipment emissions
OHP	Office of Historic Preservation
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
Pb	lead
PCB	polychlorinated biphenyls
PM	project measure

ACRONYM	DEFINITION
PM_{10}	particulate matter less than or equal to 10 microns in diameter
$PM_{2.5}$	particulate matter less than or equal to 2.5 microns in diameter
Post-Scoping	Post-Scoping Alignment Refinement Evaluation
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
PRMMP	Paleontological Resources Monitoring and Mitigation Plan
project	K Line Northern Extension Transit Corridor Project
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
RHNA	Regional Housing Needs Assessment
RMS	root mean square
ROW	right-of-way
RSA	resource study area
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
SEM	sequential excavation method
SFHA	Special Flood Hazard Area
SIP	State Implementation Plan
SLF	Sacred Lands File
SO_2	sulfur dioxide
SoCalGas	Southern California Gas Company

ACRONYM	DEFINITION
SO_X	sulfur oxides
SRA	State Responsibility Area
SVP	Society of Vertebrate Paleontology
SWP	State Water Project
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TAZ	Traffic Analysis Zone
TBM	tunnel boring machine
TCR	Tribal Cultural Resource
TMDL	total maximum daily load
TMP	Transportation Management Plan
TOD	transit-oriented development
TOZ	Transit Overlay Zone
UFC	Uniform Fire Code
USC	United States Code
USDA	United States Department of Agriculture
USEIA	United States Energy Information Administration
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UWMP	Urban Water Management Plan
VdB	vibration decibels
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
VOC	volatile organic compounds
WBWG	Western Bat Working Group
WHRS	West Hollywood Recreational Services

ACRONYM	DEFINITION
ZEV	zero-emission vehicle
ZIMAS	Zoning Information and Map Access System

CHAPTER 9 LIST OF CONTRIBUTORS AND PREPARERS

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY (METRO)

COUNTYWIDE PLANNING AND DEVELOPMENT

Mobility Corridors

- Ray Sosa, Chief Planning and Development Officer
- Allison Yoh, Deputy Chief Planning and Development Officer (Interim)
- David Mieger, AICP, Senior Executive Officer
- Dolores Roybal-Saltarelli, Interim Executive Officer
- Georgia Sheridan, AICP, Senior Director, Project Director
- Roger Martin, Senior Manager, Project Manager
- Alex Moosavi, Deputy Project Manager

Travel Demand Modeling

- Chaushie Chu, Deputy Executive Officer
- Anthony Catalina, Senior Director
- Robert Farley, Senior Manager

Systemwide Design

- Adam Light, Senior Director
- Rachelle Andrews, Senior Manager

Joint Development

- Wells Lawson, Deputy Executive Officer
- Marie Sullivan, Senior Manager

First/Last Mile Planning

- Jacob Lieb, Senior Director

Real Estate

- Craig Justesen, Executive Officer

OTHER METRO DEPARTMENTS

Construction Management

- Mark Van Gessel, Executive Officer

Project Management

- Androush Danielians, Senior Executive Officer
- Moshik Mah, Deputy Executive Officer, Transportation Architecture
- Namasivayam Sathialingam, Senior Director, Project Engineering

Third-Party Administration

- Eduardo Cervantes, Executive Officer
- Bryan Hancock, Senior Director

Bus and Rail Operations

- Joseph Forgiarini, Senior Executive Officer, Operations, Service Development
- Stewart Chesler, Manager, Service Planning

Environmental Compliance

- Cris Liban, D. Env. Chief Sustainability Officer
- Edgardo Gillera, Senior Manager

Community Relations

- Jody Litvak, Executive Officer
- Mark Dierking, Director
- Anthony Chica, Principal

Art & Community Enrichment

- Zipporah Yamamoto, Deputy Executive Officer
- Emily Sevier, Senior Manager

Communications

- Patrick Chandler, Manager, Communications

County Counsel

- Ronald Stamm, Principal Deputy County Counsel
- Tiffany Wright, Los Angeles County Counsel
- Laura Harris Middleton, Los Angeles County Counsel

CONNECT LOS ANGELES PARTNERS

WSP

- Cecily Way, Project Manager
- Christopher Lee, Project Engineer
- Rebecca Kalauskas, Planning Manager
- Michele Fesler, Environmental Document Manager
- Wesley Tam, Environmental Planner
- Jeff Crisafulli, Writer/Editor
- Ed Reynolds, Technical Editor
- Sharon Henderson, Formatting Editor
- Richard Marcus, Quality Assurance Lead
- Kristin Blackson, Environmental Manager
- Joselyn Molina, Lead Consultant
- Elizabeth Schwing, Senior Air Quality Engineer
- Rebecca Frohning, Senior Air Quality Engineer
- Alice Lovegrove, Lead Air Quality Analyst
- Edward Tadross, Senior Air Quality Analyst
- John Schober, Geotechnical Engineer
- Adam Heft, Geotechnical Engineer
- David VanGoethem, Geotechnical Engineer
- Lexie Green, Lead Drainage Engineer
- Kevin Keller, Noise and Vibration Specialist
- Steven Wolf, Noise and Vibration Specialist
- Lawrence Spurgeon, Lead Environmental Planner
- April Ryckman, Environmental Scientist
- Vamshi Akkinepally, Transportation Engineer
- Eric Jordan Serre, Transportation Planner
- Daniel Weinstein, Transportation Planner
- Rick Curry, Travel Demand Forecaster
- Jielin Sun, Travel Demand Forecaster
- Xianting (Alice) Huang, Travel Demand Forecaster
- Christina Baghdasarian, Environmental Planner
- Jason Choi, Senior Geotechnical and Tunneling Engineer

- Ian Lau, Geotechnical Engineer
- Christina Argyrou, Geotechnical Engineer
- Lucy Wu, Geotechnical Engineer
- Ke Fan, Geotechnical Engineer
- Sergio Magallon, Maintenance and Storage Facility and Track Engineer
- Marco Innao, Operations Lead
- Foster Nichols, Operations Lead
- Jackson Huang, Architect
- Arvind Patel, Traction Power Systems Engineer
- Matt Geyer, Maintenance and Storage Facility Engineer
- Eric Stroud, Maintenance and Storage Facility Engineer
- Mike Hawkins, Civil Engineer
- Michael Harris-Giffords, Systems Engineer
- William Keyes, Systems Engineer
- Jessie Jones, Graphic Designer
- Alan Keizur, Risk Assessor

AECOM

- Robert Hertz, Deputy Project Manager
- Marlen Alfonso Perez, Engineering Manager
- Ryan Winn, Transportation Planner
- Jeremy Halpern, Senior Transportation Planner/Engineer
- Dan Arellano, GIS Supervisor
- Mark Scop, GIS Operator
- Dan Brady, Graphic Designer
- Richard Silos, Quality Assurance Support
- Shannon Ledet, Lead Environmental Planner
- Lori Keller, Environmental Planner
- Emma Fraser, Senior Biologist
- Vanessa Tucker, Biologist
- Stephanie Jow, Senior Archaeologist
- Trina Meiser, Architectural Historian
- Monica Wilson, Architectural Historian
- Alec Stevenson, Archaeologist

- Paola Peña, Air Quality Scientist
- Kendall Myers, Infrastructure Economist
- Toni Horst, Lead Infrastructure Economist
- Katherine Lee, Transportation Planner
- Jaime Guzman, Environmental Planner
- Jennifer Lee, Environmental Planner
- Jessica Koon, Transportation Planner
- Edgar Mejia, Transportation Planner
- Nadia d'Paraschi-Tigo, Drainage Engineer
- Dino Dedoevic, Track and Alignment Designer
- Asia Robinson, Engineer
- Osborne Anthony, Stations Lead
- William Lockwood, Stations Designer
- Joseph Schoenborn, Stations Designer
- Kim Wong, Stations Designer
- Sarah Perhala, Hazardous Materials Lead
- Jessica Himebauch, Hazardous Materials Lead
- Seth Teora, Utilities Engineer
- Annie Merritt, Utilities Engineer
- Russell Link, Capital Cost Estimator
- Richard Redmond, Capital Cost Estimator/Tunnels Designer
- John Swartz, Capital Cost Estimator/Stations Designer
- Dilip Shah, Tunnel Ventilation Designer
- Bradley Zundel, Tunnel Ventilation Designer
- Patrick Coleman, Travel Demand Forecaster/Ridership Modeler
- Nagaraju Kashayi Chowdojirao, Travel Demand Forecaster/Ridership Modeler
- Lynn Feng, Travel Demand Analyst
- Paul Roy, Tunnel Designer
- Susan Ambrosini, Urban Designer
- Aryeh Cohen, Urban Designer
- Paul Tonkin, CAD Manager
- Eugene Kim, Construction Approach Planner/Scheduler
- Kevin Sheahen, Construction Approach Planner/Scheduler

CONAWAY

- Shannon Conaway, Surveyor
- Craig Wilson, Surveyor
- Tara Mitchell, Right-of-Way Lead
- Tess Paige, Right-of-Way Lead
- Donyea Adams, Right-of-Way Specialist/Quality Control

HERE LA

- Amber Hawkes, Urban Designer
- Shannon Davis, Urban Designer

INTEUOR CONSULTING

- Farid Naguib, Lead Traffic Engineer
- Wahid Farhat, Traffic Engineer

JENKINS/GALES & MARTINEZ

- Efrain Sanchez, Architect

JKH CONSULTING

- Jamarah Hayner, Public Affairs Specialist

LELAND SAYLOR

- Allan Sheung, Capital Cost Estimator

MA ENGINEERING

- Adolfo Mota, Drainage Engineer

NELSON\NYGAARD

- James Baker, Senior Principal, Operations Planner
- Susan Rosales, Operations Planner
- Adam Barnum, Operations Planner

RAW INTERNATIONAL

- Roland Wiley, Architect
- Gary Grigorian, Architect
- Kevin Arneal, Architect

STUDIO-MLA

- Kevin Johnson, Urban Designer and Planner
- Manuel Merino, Landscape Architect

SUENRAM & ASSOCIATES

- Kate Suenram, Utilities Engineer

SYSTEMS CONSULTING

- Laura Torbet, Document Specialist

V&A

- David Pardez, Utilities/Drainage Engineer
- Noah Busch, Utilities/Drainage Engineer
- Jose Varias, Utilities/Drainage Engineer

VICUS

- Monica Villalobos, Principal
- Bhanuja Damarla, Urban Designer
- Jason Cheng, Urban Planner
- Gema Martinez Castillo, Urban Planner
- Xochitl Sosa, Urban Planner

ZEPHYR

- Matt Guzman, Project Engineer
- Marc Canas, Principal
- Allen Wu, Rail Engineer
- Laisha Alanis, Rail Engineer
- Candice Nguyen, Rail Engineer

LEE ANDREWS GROUP

- Joseph Legaspi, Vice President of Community Affairs
- Natalie Mansergh, Account Executive