Sixth Street Park, Arts, River & Connectivity Project (PARC) Project

SCH #2017041045

DRAFT ENVIRONMENTAL IMPACT REPORT

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PREPARED FOR:

City of Los Angeles, Department of Public Works
Bureau of Engineering, Environmental Management Group
1149 S. Broadway, Suite 600, Los Angeles CA 90015
Contact: Dr. Jan Green Rebstock, Environmental Supervisor II
213-485-5761, Jan.Green.Rebstock@lacity.org

WITH ASSISTANCE FROM:

GPA Consulting

ENGINEERING
CITY OF LOS ANGELES

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Executive Summary

Introduction and Background

This Draft Environmental Impact Report (EIR) evaluates the Sixth Street Park, Arts, River & Connectivity Improvements (PARC) Project (proposed Project) in the City of Los Angeles pursuant to the requirements of the California Environmental Quality Act (CEQA, Public Resources Code sections 21000 et. seq.) and the CEQA Guidelines. The City of Los Angeles (City), on behalf of the Department of Public Works, Bureau of Engineering (LABOE), is the Lead Agency under CEQA.

The proposed Project includes the creation of public recreational space on approximately 13 acres underneath and adjacent to the Sixth Street Viaduct (Viaduct), also known as the "Sixth Street Bridge." The Viaduct was recently demolished as part of the Sixth Street Viaduct Seismic Improvement (Replacement) Project, referred to in this EIR as the "Viaduct Replacement Project." Construction of the new Viaduct is anticipated to be substantially complete in 2022. As part of the Viaduct Replacement Project, the City acquired the land underneath and adjacent to the Sixth Street Viaduct. Rather than keep this land vacant, the City is proposing to transform this land into a public recreational space, while still providing required access for inspection and maintenance of the viaduct.

This Executive Summary provides an overview of the proposed Project and its environmental effects in accordance with Section 15123 of the CEQA Guidelines. As described in **Table ES-3**, at the end of this Executive Summary, all impacts would be reduced to less than significant impacts with adherence to standard regulatory and permit requirements or implementation of mitigation measures and identified project design features.

Project Location and Setting

The Project Area spans from Mateo Street in Downtown Los Angeles' (LA) Arts District, over the LA River, to United States Highway 101 (U.S. 101) in Boyle Heights between Fourth Street and Seventh Street. The Project Area is within a fully developed, mixed-use urban setting adjacent to the LA River. Land uses along the north and south sides of the Viaduct are predominately industrial and commercial. The Viaduct crosses over several railroad tracks on both sides of the LA River.

The majority of the Project Area is currently being used as a construction and staging site for the Viaduct Replacement Project. An existing pedestrian and maintenance tunnel, which is owned by the City, is located under the Viaduct on the west side of the LA River. This tunnel provides access to the LA River from Santa Fe Avenue. This segment of the LA River is contained within a concrete flood control channel.

Proposed Project Summary

The City is proposing to create approximately 13 acres of public recreational space underneath and adjacent to the Sixth Street Viaduct. The proposed Project would be divided into two phases. The following elements would be constructed as part of Phase I of the proposed Project. Elements that would be subject to available funding are identified with an asterisk (*).

- **General Park Elements:** Elements that would be constructed throughout the Sixth Street PARC would include constructing or installing typical park site furnishings, pedestrian and bicycle paths, interpretive exhibits, utility connections and irrigation, crosswalks, and stormwater infrastructure improvements.
- **East Park:** The proposed East Park, located in the Boyle Heights Community Plan area, would include amenities such as a concessions area, public restrooms, office and storage space for operations and maintenance staff, sports courts and fields, two flexible play and performance lawns,* adult fitness circuit,* splash pad with outdoor shower,* picnic and grilling areas,* on-street parking, landscaped seating areas and rain gardens, small and large dog play areas,* children's play area,* and skate park elements. A public art piece could also potentially be installed in East Park.
- **West Park:** The proposed West Park, located in the Central City North Community Plan area, would include amenities such as a flexible play and performance lawn, small and large dog play areas, an adult fitness circuit, a café building,* public restroom, landscaped areas and a rain garden, and a public art piece.
- **Arts Plaza and River Gateway:** The proposed Arts Plaza, located in the Central City North Community Plan area, would include amenities such as performance and public gathering areas and space for future mobility hub elements, bike parking, and bikeshare. The proposed River Gateway would include rehabilitating an existing pedestrian/vehicular tunnel that provides access to the LA River channel.

Phase II would include installing reinforced concrete planted terraces on the east and west banks of the LA River channel. The proposed Project generally includes components noted in the Los Angeles River Revitalization Master Plan (City of Los Angeles, 2007).

Project Objectives

The proposed Project has the following objectives:

- Serve the open space and recreational needs of surrounding communities;
- Connect and improve neighborhoods;
- Incorporate sustainable design consistent with the City's plans and goals;
- Encourage active modes of transportation and public transit;
- Promote beneficial stormwater treatment and/or capture; and
- Provide safe pedestrian and bicycle access to the LA River.

Project Schedule

Construction would be divided into two phases. Phase I, which includes construction of the West Park, Arts Plaza, and East Park elements, is anticipated to begin September 2022 and finish by 2024. Phase II, which would include the construction of the LA River portion, including reinforced concrete planted terraces, would be constructed independently of Phase I. The timing of Phase II construction, which may occur concurrently with or after Phase I construction, is dependent on available funding and approval by

the United States Army Corps of Engineers. For purposes of this environmental review, Phase I and II construction activities may overlap. Currently, Phase I is expected to run from 2022-2024, and Phase II is expected to begin in 2025 or later.

Construction would be coordinated with the Sixth Street Viaduct Replacement Project to the greatest extent feasible to ensure that Viaduct work would not be interrupted and to prevent potential conflicts. Construction of the Viaduct is expected to be completed by mid-2022.

Required Approvals

Table ES-1 lists the anticipated permits and approvals required for the proposed Project.

Table ES-1: Required Permits, Approvals, and Permission

Responsible Agency	Anticipated Permits, Approvals, and Related Issues
Federal	
United States Army Corps of Engineers	Clean Water Act (CWA) Section 404 Permit Section 14 of the Rivers and Harbors Act (Section 408) Permit, includes National Environmental Policy Act (NEPA) approval
Federal Railroad Administration	Any applicable permits
Federal Transit Administration	Any applicable permits
State	
Department of Toxic Substances Control	Any applicable permits
California Department of Fish & Wildlife	Section 1602 Streambed Alteration Agreement
California State Historic Preservation Office	National Historic Preservation Act Section 106 consultation and agreement document to resolve any potential adverse effects to historic resources
Regional	
Regional Water Quality Control Board	CWA Section 401 Water Quality Certification CWA Section 402 National Pollutant Discharge Elimination System (NPDES) Permit
Los Angeles County Metropolitan Transit Authority	Any applicable permits Coordination related to public transit, bikeways, and adjacent facilities
Los Angeles County Public Health Department	Review plans for children's splash pad
Los Angeles County Fire Department	Review and advise on site remediation plans
South Coast Air Quality Management District	Any applicable permits

Responsible Agency	Anticipated Permits, Approvals, and Related Issues
Local	
City of Los Angeles Department of Recreation and Parks	Responsible for operation and maintenance of portions of the park
City of Los Angeles Department of City Planning	Potential changes to land use designations or zoning, as well as street designations Any applicable permits
City of Los Angeles Department of Water and Power	Any applicable permits, coordination, and approval
City of Los Angeles Bureau of Sanitation	Low Impact Development Compliance, system design coordination, system design approval, and maintenance of a portion of stormwater infrastructure (if applicable)
City of Los Angeles Fire Department	Any applicable permits Coordination related to emergency access
City of Los Angeles Department of Transportation	Non-CEQA Transportation Assessment Guidelines Consistency Review Traffic management plans
City of Los Angeles Bureau of Street Lighting	Street lighting design and approval
City of Los Angeles Board of Public Works	Recommendations regarding Project approval and Environmental Impact Report (EIR) certification
Los Angeles City Council	Project approval and certification of EIR
City of Los Angeles Department of Building and Safety	Any applicable permits
City of Los Angeles Cultural Affairs Department	Any applicable permits and coordination related to public art
All railroad agencies owning and operating railroad tracks along both sides of the LA River	Railroad Maintenance Agreement for work within railroad right-of-way

Comments Received on the Notice of Preparation

In accordance with Section 15082 of the CEQA Guidelines, LABOE prepared a Notice of Preparation/Initial Study (NOP/IS) for the proposed Project on April 13, 2017. The NOP was circulated for 30 days. The comment period ended on May 15, 2017.

The NOP/IS was circulated to members of the public, local and state agencies, organizations, and interested parties to solicit comments on the proposed Project. The NOP/IS was available on the LABOE website and at local public facilities. A newspaper advertisement, informing the public of the availability of the NOP/IS, was printed in English in *DTLA News* and in Spanish in *La Opinión*. Comment letters were

received from agencies, tribes, interested organizations, and the public. In addition, scoping meetings were held on May 3, 2017 (English), and on May 11, 2017 (Spanish).

Public comments submitted during the scoping period expressed concerns regarding the following issues, which are discussed in more detail in the following section:

- Air Quality
- Cultural Resources
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise and Vibration
- Population and Housing
- Public Services
- Transportation and Traffic
- Utilities and Service Systems

The public comment letters are included in **Appendix A** (Notice of Preparation/Initial Study) of this EIR.

Issues Raised

Table ES-2, includes a summary of comments received and issues raised during the public scoping period in response to the NOP/IS. This table includes issues identified and discussed in comment letters and orally at public meetings and identifies the section of the Draft EIR where the issues are addressed, as applicable.

Issues to Be Resolved

Issues to be resolved by the City, include the following:

- Determine whether the EIR adequately describes the environmental impacts of the proposed Project;
- Determine whether the recommended mitigation measures should be adopted or modified;
- Determine whether additional mitigation measures need to be applied to the proposed Project; and
- Consider the information contained in the administrative record, created during the environmental review process, and determine whether to approve the proposed Project.

Summary of Environmental Impacts

Impacts Determined to Require No Further Consideration in This EIR

The Initial Study determined that the proposed Project would have no impact or less than significant impacts on mineral resources and agriculture and forestry resources. Therefore, these resources are not analyzed in this Draft EIR.

Impacts Determined to Be Less than Significant

The City determined that the proposed Project with implementation of best management practices or mitigation would have a less than significant impact on the following resources:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources and Tribal Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise and Vibration
- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
  Utilities and Service Systems

These impacts are evaluated in detail in Chapter 3 of this Draft EIR and are summarized in **Table ES-3** at the end of this Executive Summary.

Table ES-2: Summary of Comments Received during the Public Scoping Period

Commenter	Agency/ Interested Party	Date of Correspondence	Type of Correspondence	Summary of Issues	Section of EIR Where Issue Is Addressed
State Agencies					
Dianna Watson, IGR/CEQA Branch Chief	California Department of Transportation	May 10, 2017	Letter	Per Senate Bill 743, the agency expressed that Vehicle Miles Traveled (VMT) should be used as the primary metric for identifying transportation impacts. The agency requested that the development should consider multi-modal and complete streets transportation elements. The agency also provided a list of elements to include in the traffic study.	Transportation and Traffic
Juli Propes, Unit Chief	California Department of Toxic Substances Control	May 22, 2017	Letter	The agency provided direction regarding the discussion of hazardous wastes and substances and plans for managing hazards in the draft EIR, as well as procedures for handling environmental remediation and contaminated substances.	Hazards and Hazardous Materials
Gayle Totton, Associate Governmental Program Analyst	Native American Heritage Commission	April 18, 2017	Letter	The agency recommended that the City consult with all California Native American tribes affiliated with the Project Area.	Cultural Resources
Regional Agencies					
Lijin Sun, Program Supervisor	South Coast Air Quality Management District	May 5, 2017	Letter, Email	The agency provided information regarding analysis, mitigation measures, alternatives, permits, and data sources related to air quality impacts.	Air Quality

Commenter	Agency/ Interested Party	Date of Correspondence	Type of Correspondence	Summary of Issues	Section of EIR Where Issue Is Addressed
Local Agencies					
Ali Poosti, Division Manager	City of Los Angeles Bureau of Sanitation	May 1, 2017	Letter	The agency wanted to be notified of additional Project description details as they relate to sewer capacity availability. In addition, the agency communicated their role in ensuring implementation of the Municipal Stormwater Permit requirements, including post-construction mitigation requirements, Green Street elements, construction requirements, groundwater dewatering reuse options, and solid resource requirements.	Hydrology and Water Quality Utilities and Service Systems
Paul J. Davis, Environmental Supervisor	City of Los Angeles Department of Recreation and Parks	May 24, 2017	Email	The department expressed concerns regarding the exposure of sensitive receptors to pollution and noise. The department requested that through streets and pedestrian safety be discussed. The department also provided clarification on materials used for synthetic sports fields.	Air Quality Hazards and Hazardous Materials Transportation and Traffic
Edgar Mercado, P.E. Charles C. Holloway, Manager of Environmental Planning and Assessment	City of Los Angeles Department of Water and Power (LADWP)	May 12, 2017	Email	Water – The agency expressed that they will follow up with additional comments and provided water system contacts. Power – The agency listed the potential conflicts the Project may have on LADWP power system facilities within the Project Area.	Utilities and Service Systems
Armando D'Angelo	Los Angeles County Flood Control District	March 15, 2018	Email	The agency requested that LADWP Transmission Right of Way (TLRW) should be acknowledged	Utilities and Service Systems

Commenter	Agency/ Interested Party	Date of Correspondence	Type of Correspondence	Summary of Issues	Section of EIR Where Issue Is Addressed
	River Cooperation Committee			and that LADWP be included as a Responsible Agency.	
Therese W. McMillan, Chief Planning Officer	Los Angeles County Metropolitan Transportation Agency	May 22, 2017	Letter	The agency expressed the desire to ensure that the Project be designed to accommodate existing transportation facilities and the transportation investments that are currently under development. The agency would also like to explore opportunities for a Metro station in the Project vicinity that would serve the park and surrounding areas. In addition, the agency requested that the City consider potential impacts of the Project on existing rail facilities, with special attention to ROW impacts. The agency provided the Adjacent Construction Design Manual for guidelines on constructing a project near Metro facilities.	Transportation and Traffic
Native American Groups					
Andrew Salas, Chairman	Gabrieleño Band of Mission Indians-Kizh Nation	April 18, 2017	Letter	The tribe submitted a request for consultation pursuant to Assembly Bill 52.	Cultural Resources
Other Interested Parties/Public					
Wade Smith	Amtrak	May 15, 2017	Email	Concerns regarding public safety and security were expressed. The agency suggested that protective measures to minimize future fatalities of trespassers on rail tracks should be considered. The agency also expressed that existing and future rail activities may produce lights, noise, and diesel engine exhaust, and a sufficient buffer area should be considered.	Air Quality Land Use and Planning Public Services Noise and Vibration

Commenter	Agency/ Interested Party	Date of Correspondence	Type of Correspondence	Summary of Issues	Section of EIR Where Issue Is Addressed
Miguel Vargas, Executive Director	Arts District Los Angeles Business Improvement District	May 17, 2017	Email	The organization expressed a variety of concerns regarding future transit opportunities, existing utilities, bike and facility rental opportunities, facility maintenance and management, security, homelessness, incorporation of the LA River Revitalization Master Plan, and mechanical and electrical requirements for Project operations.	Land Use and Planning Population and Housing Transportation and Traffic Public Services Utilities and Service Systems
Joe Diaz	Boyle Heights Technology Youth Center	May 3, 2017	Oral Comment	The commenter expressed support for the proposed Project and suggested that community meetings should also be held in different locations throughout the Project Area to receive more community input.	N/A
Joanne Danganan	Central City Association	May 3, 2017	Oral Comment	The commenter expressed support for the proposed Project and the inclusion of a Metro Station to the LA Arts District to increase business and walkability in the area.	Transportation and Traffic
Jessica Lall, President and CEO	Central City Association of Los Angeles	May 22, 2017	Letter	The organization expressed a desire to integrate a potential Sixth Street Metro Station into the park design to address growth in the surrounding area and attract visitors to the park.	Transportation and Traffic
Marissa Christiansen, Executive Director	Friends of the LA River	May 18, 2017	Letter	The organization encouraged that the draft EIR discuss the Project's impact on the LA River, as well as evaluate the Project's potential effect on and consistency with the LA River Revitalization Master Plan. The agency also expressed a strong desire for the inclusion of terraced banks and a	Hydrology and Water Quality Land Use and Planning

Commenter	Agency/ Interested Party	Date of Correspondence	Type of Correspondence	Summary of Issues	Section of EIR Where Issue Is Addressed
				public access tunnel to the LA River to provide safe pedestrian and bicycle access.	
Margarita Amador	Hollenbeck Community – Police Advisory Board	May 3, 2017	Oral Comment	The commenter expressed concerns regarding pedestrian access, street lighting, public transit, park maintenance, safety and security, potential filming at the proposed Project Site, and irrigation.	Transportation and Traffic Public Services Hydrology and Water Quality
Raul Diaz	Homeboy Industries	May 3, 2017	Oral Comment	The commenter expressed concerns regarding the protection of soil and inspection prior to construction; traffic concerns surrounding the Project Area; pedestrian safety concerns; suggestions for an industrial building on Anderson Street, adjacent to the proposed Project Site; and suggestions for historic landmarks in the proposed Project Site.	Geology and Soils Transportation and Traffic Public Services Cultural Resources
Melissa Uribe	Innercity Struggle	May 3, 2017	Comment Card	The commenter expressed concerns regarding gentrification, population growth, and displacement, calling attention to the preservation of existing Rent Stabilization Ordinance, affordable housing, and small businesses on the east side of the LA River.	Population and Housing
Edwin Amorado	Keep LA Green	May 3, 2017	Oral Comment	The commenter expressed support for the proposed Project. The commenter also expressed interest in including a boxing gym at the proposed Project Site, parking reduction to increase walkability, and 24-hour lighting to deter crime in the area.	Transportation and Traffic Public Services

Commenter	Agency/ Interested Party	Date of Correspondence	Type of Correspondence	Summary of Issues	Section of EIR Where Issue Is Addressed
Mitra Khayyam	Public	April 19, 2017	Email	The commenter expressed support for the project and called attention to paving of the Seventh Street Bridge.	N/A
Chloe Ginnegar	Public	May 3, 2017	Comment Card	The commenter expressed concerns regarding housing development, gentrification, and rent prices on the east side of the LA River.	Population and Housing
Daría Nuñez	Public	May 3, 2017	Oral Comment	The commenter expressed support for the project; concern for pollution during construction of the project; and suggested that there should be more community meeting in different locations, project documents in Spanish, facilities for children and seniors, services in the evening for the youth, and an aquatic park.	Air Quality
Samuel Gonzales	Public	May 3, 2017	Oral Comment	The commenter expressed concern regarding health issues in the community due to air pollution, chemical contamination from the existing railroad tracks, and hazardous material disposal. The commenter also expressed interest in artistic and cultural representation in the proposed Project Site.	Air Quality Hazards and Hazardous Materials Cultural Resources
Lori Atwater	Public	May 21, 2017	Email, Oral Comment	The commenter expressed concerns regarding the effects of development and construction on homeless populations and advised that homeless populations are described as part of the existing populations. The commenter also advised that the project incorporate recommendations from	Population and Housing

Commenter	Agency/ Interested Party	Date of Correspondence	Type of Correspondence	Summary of Issues	Section of EIR Where Issue Is Addressed
				local and statewide legislation regarding homelessness.	
Russell Brown	Regional Connector Community Leadership Council	May 3, 2017	Oral Comment	The commenter expressed that there should be multiple transit stations included as part of the project on First, Second, and Sixth Street; as well as the inclusion of multimodal forms of transportation.	Transportation and Traffic
Ana Hernández	Resident Advisory Committee Pico Gardens	May 3, 2017	Oral Comment	The commenter expressed concerns regarding the increase of pollution in the community of Boyle Heights and resident displacement; suggested that project documents should be translated into Spanish; and requested that community meetings be held within the affected community, and that representative organizations such as Proyecto Pastoral and Union de Vecinos be invited to increase community participation.	Air Quality Population and Housing
Delmira Gonzalez	Resident Advisory Committee Pico Gardens	May 3, 2017	Oral Comment	The commenter expressed concerns regarding traffic in the Project Area, synthetic turf being used for the sports fields, and increases in noise and air pollution. The commenter also suggested that the proposed Project should include a skate park, an aquatic park, and an entertainment area for children.	Transportation and Traffic Noise and Vibration Air Quality
Ofelia Platon	Union de Vecinos	May 3, 2017	Oral Comment	The commenter expressed concerns regarding the increase of pollution in Boyle Heights from the construction and operation of the Viaduct, water contamination, and safety and security for the proposed Project. The commenter also	Air Quality Hydrology and Water Quality Public Services

Commenter	Agency/ Interested Party	Date of Correspondence	Type of Correspondence	Summary of Issues	Section of EIR Where Issue Is Addressed
				suggested that housing for homeless people should be constructed instead of a park.	Population and Housing
Madeline E. Roebke, Senior General Counsel	Union Pacific Railroad	May 15, 2017	Email	The stakeholder expressed concerns related to traffic, trespassing, noise and vibration, and storm water drainage.	Hydrology and Water Quality Land Use and Planning Noise and Vibration Transportation and Traffic

N/A = Not Applicable

Significant Unavoidable Impacts

With implementation of mitigation measures, the proposed Project would not result in significant unavoidable impacts.

Cumulative Impacts

With implementation of mitigation measures, the proposed Project's contribution to cumulative impacts would be less than significant.

Significant Irreversible Environmental Changes that Would Be Caused by the Proposed Project Should It Be Implemented

Implementation of the proposed Project would commit nonrenewable (e.g., petroleum) or slowly renewable (e.g., timber) resources during Project construction and operation. In order to construct the proposed Project, machinery, equipment, materials (e.g., lumber, sand, gravel) and workers would be required, representing an irreversible commitment of some of these resources. Similarly, during operation, some of these resources (e.g., energy, electricity) would again be needed, representing a long-term commitment and permanent investment. The consumption and use of some of these resources would limit their availability for future generations. In addition, construction of the proposed Project would also irreversibly change existing views to and from the Project Area. However, the proposed Project would serve the open space and recreational needs of the surrounding communities, connect and improve neighborhoods, incorporate sustainable design elements, encourage active modes of transportation and public transit, and promote beneficial stormwater treatment and/or capture. In addition, the proposed Project would provide safe pedestrian and bicycle access in the vicinity of the LA River, which could accommodate potential future connections to other planned pedestrian and bicycle paths. Therefore, the City determined that irreversible changes are acceptable in light of the proposed Project's overall benefits.

Growth-Inducing Impacts

One of the primary objectives of the proposed Project is to serve the open space and recreational needs of surrounding communities. By providing open space, connecting neighborhoods, providing access in the vicinity of the LA River, and promoting beneficial stormwater treatment and/or capture, active modes of transportation (i.e., walking and biking), and other sustainable design features, the proposed Project would be consistent with the City's plans and goals. Because the proposed Project would not provide residences or substantial employment opportunities, the proposed Project is not intended to facilitate population or employment growth. Rather, the proposed Project would address existing deficiencies by providing a park with recreational opportunities to communities that demonstrate high need for these facilities. Therefore, the proposed Project is not considered growth inducing.

Alternatives and the Environmentally Superior Alternative

Section 15126.6(a) of the CEQA Guidelines requires that an EIR "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." In addition, Section 15126.6(e) requires that an EIR evaluate a "no project" alternative. The City and its design team conducted meetings to develop design options for the proposed park (see Chapter 4 for additional information). The following two build alternatives were developed and evaluated in addition to the proposed Project and the No Project Alternative:

- Alternative 1 – Nature Focused Alternative
- Alternative 2 – Sports Focused Alternative

CEQA Guidelines require the identification of the environmentally superior alternatives. The No Project Alternative would be the environmentally preferred alternative. Section 15126.6(e)(2) of the CEQA Guidelines state, "If the environmentally superior alternative is the no project alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." Based on the analysis in Chapter 4 of this EIR, Alternative 1 was determined to be the Environmentally Superior Alternative. This analysis focused on impacts identified as significant and unavoidable.

Summary of Impacts and Mitigation Measures

Table ES-3 includes a summary of impacts by environmental resource area, the significance determination before mitigation, proposed mitigation measures (if any), and any remaining impacts after mitigation is applied. Best management practices that would be adopted as part of the project are identified in **Table ES-4**.

Table ES-3: Summary of Environmental Impacts and Mitigation Measures

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Aesthetics			
I(a). Scenic Vistas There are no officially designated scenic vistas, resources, or highways that are within the Project Area or visible from the Project Area. The Downtown LA skyline is visible from the Project Area and could be considered a valued landscape. Construction equipment would introduce new vertical elements in the Project Area, but they would not obstruct views of the Downtown LA skyline. The proposed Project would introduce vertical elements (i.e., large vegetation, trees, a 30-foot tall public art piece, and general site and sports field lighting). These vertical elements would not obstruct the view of the Downtown LA Skyline. Therefore, the proposed Project would not affect scenic vistas.	Less than Significant	No mitigation measures are required.	Less than Significant
I(c). Scenic Quality The Project Area is in an urbanized area. Los Angeles zoning code and regulations would not prohibit any of the proposed construction activities or the operational land use. The proposed Project design would be consistent with the design guidelines established for the River Improvement Overlay district. Therefore, the proposed Project would not conflict with applicable zoning and other regulations governing scenic quality.	Less than Significant	No mitigation measures are required.	Less than Significant
I(d). Light and Glare Perimeter lighting may be required on the construction site for security purposes during nighttime. If nighttime	Less than Significant	No mitigation measures are required.	Less than Significant

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
lighting at the construction site is required, lighting would be directed downward, on-site, and away from surrounding land uses. The proposed Project would comply with the provisions in the City's Municipal Code. Proposed Project operations would introduce new sources of light to the Project Area to increase public safety and visibility at night. The sports fields and performance areas would feature switchable and dimmable lights when the facilities are not in use; lighting for recreational activities would be limited to the proposed operating hours; and lighting would be directed away from surrounding land uses. Therefore, the proposed Project would not result in adverse impacts related to light, glare, or nighttime illumination.			
Air Quality			
III(a). Conflict with or obstruct implementation of the applicable air quality plan Short-term construction is projected to result in increased nitrogen oxide (NO_x) emissions that would exceed the South Coast Air Quality Management District's (SCAQMD) recommended significance threshold. Emissions generated during construction could potentially conflict with or obstruct air quality planning efforts. Operation of the proposed Project would not result in overall increases in emissions of ozone-precursor pollutants (volatile organic compounds [VOC] and NO_x) or particulate matter (PM) that would exceed SCAQMD's recommended significance thresholds When evaluated on an annual basis, considering the number of events	Potentially Significant (Construction) Less than Significant (Operation)	Implement **MM-AQ-1: Newer/Tier 4 Engines in Haul Trucks and Construction Equipment** • Include in all construction contracts the requirement to use 2007 and newer diesel haul trucks (e.g., material delivery trucks and soil import/export). • Include in all construction contracts the requirement that all off-road diesel-fueled construction equipment greater than 50 horsepower shall meet Tier 4 off-road emission standards. In addition, if not already supplied with a factory-equipped diesel particulate filter, all construction equipment shall be outfitted with Best Available Control Technology (BACT) devices	Less than Significant (Construction and Operation)

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
anticipated to occur, the proposed Project would result in an overall emissions reduction when compared to the existing industrial uses that were removed.		certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. To the extent locally available, construction equipment shall incorporate emissions savings technology such as hybrid drives. In the event that any equipment required under this mitigation measure is not available, provide documentation as information becomes available. A copy of each unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit at the time of mobilization of each applicable unit of equipment shall be provided. • Maintain construction equipment by conducting regular tune-ups according to the manufacturers' recommendations. • To the extent possible, the import and export of onsite materials shall be scheduled to minimize empty return trips. Implement **MM-AQ-2: Construction Equipment Requirements** • All on- and off-road diesel-fueled equipment shall not idle for more than 5 minutes when not in use. The idling of diesel-fueled equipment and haul trucks within 1,000 feet of nearby residential land uses shall be prohibited. Signs shall be posted in the designated queuing areas	

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		and or job sites to remind drivers and operators of the 5-minute-idling limit. • Staging and queuing areas shall be located at the furthest distance possible from nearby residential land uses; • Use alternatively fueled (e.g., compressed natural gas, liquefied natural gas, propane), gasoline-fueled, or electrified construction equipment in place of diesel-fueled equipment to the extent locally available. The following additional measures are recommended to help ensure consistency with SCAQMD rules and regulations, including (but not limited to) Rule 403 for the control of fugitive dust. Implement **MM-AQ-3: Fugitive Dust Controls** • All active portions of the construction site shall be watered twice daily to prevent excessive amounts of dust. • Non-toxic soil stabilizers shall be applied to all inactive construction areas (previously graded areas inactive for 20 days or more, assuming no rain) according to manufacturers' specifications. • All excavating and grading operations shall be suspended when wind gusts (as instantaneous gust) exceed 25 miles per hour. • On-site off-road equipment and on-road vehicles used on-site shall be limited to 15 miles per hour.	

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		• All on-site roads shall be paved as soon as feasible, watered twice daily, or chemically stabilized. • Visible dust beyond the property line which emanates from the project shall be prevented to the maximum extent feasible. • All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust prior to departing the job site. • Track-out devices shall be used at all construction site access points. • All delivery truck tires shall be watered down and/or scraped down prior to departing the job site. • Streets shall be swept at the end of the day if visible soil material is carried onto adjacent paved public roads and use of SCAQMD Rule 1186 and 1186.1 certified street sweepers or roadway. • Replace ground cover in disturbed areas as quickly as possible. • All trucks that are to haul excavated or graded material on-site shall comply with State Vehicle Code Section 23114 (Spilling Loads on Highways), with special attention to Sections 23114(b)(F), (e)(4) as amended, regarding the prevention of such material spilling onto public streets and roads.	

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		• Conduct continuous, direct-reading, near real-time ambient monitoring of PM10. Install appropriate signage and notify the SCAQMD in accordance with Rule 1466, Control of Particulate Emissions from Soils with Toxic Air Contaminants, prior to conducting any earth-moving activities on any site meeting the applicability of the rule.	
III(b). Cumulatively considerable net increase of criteria pollutants. Construction-generated emissions of NOx would exceed SCAQMD's significance threshold of 100 pounds per day. Construction of the proposed Project could result in a cumulatively considerable net increase of ozone-precursor pollutants for which the region is designated non-attainment, particularly if other projects in the general vicinity of the project site are under construction during the same construction period. Operational emissions associated with the proposed Project would not exceed SCAQMD's recommended significance thresholds.	Potentially Significant (Construction) Less than Significant (Operation)	Implement **MM-AQ-1** through **MM-AQ-3** described above.	Less than Significant (Construction and Operation)
III(c). Expose sensitive receptors to substantial pollutant concentrations. *Localized Pollutant Concentrations from Onsite Sources* Construction-generated and operational emissions would not exceed SCAQMD localized significance thresholds (LSTs). *Asbestos*	Less than Significant	No mitigation measures are required.	Less than Significant

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
The Project Site is not located in an area of naturally occurring asbestos. In addition, construction and operation of the proposed Project would not involve the demolition of structures having asbestos containing materials. *Diesel-Exhaust Particulate Matter (DPM)* Proposed construction activities would involve the use of diesel-fueled equipment. Because the use of off-road heavy-duty diesel equipment would be temporary and episodic occurring over a relatively large area, and DPM has highly dispersive properties, project construction would not expose sensitive receptors to substantial emissions of DPM in excess of applicable thresholds. *Mobile-Source Carbon Monoxide* Operation of the proposed Project would not result in a degradation of LOS at primarily affected intersections that are projected to operate at unacceptable levels of service. Therefore, impacts related to the project's contribution to localized CO concentrations would be less than significant.			
III(d). Other emissions including those leading to odors Proposed construction activities would emit exhaust fumes, which may be considered objectionable by some people. In addition, pavement and architectural coatings would also emit temporary odors. Construction-generated emissions would occur intermittently and would dissipate rapidly within increasing distance from the source. As a result, short-term construction activities would not expose a substantial number of people to frequent odorous emissions.	Less than Significant	No mitigation measures are required.	Less than Significant

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
No major sources of odors have been identified in the Project Area. In addition, operation of the proposed Project would not include the installation of any major sources of odors.			
Biological Resources			
IV(a). Candidate, Sensitive, or Special-Status Species *Special-Status Plants* Special-status plants species are not expected to be in the Project Area. *Special-Status Wildlife* Removal of habitat and increased noise, vibration, light, carbon dioxide, and human activity during proposed construction activities could impact special-status wildlife. BMPs would be implemented to reduce construction-related impacts. Increased lighting, noise, human activity, and regular maintenance of vegetated areas during operation of the proposed Project could result in minor impacts on special-status wildlife; however, because there is already a high level of human activity, lighting, and noise in the Project Area, the proposed Project would not be expected to deter wildlife from using existing habitat. Proposed natural and artificial substrates would potentially create additional nesting and roosting habitat for special-status birds and bats.	Less than Significant	No mitigation measures are required.	Less than Significant
IV(b). State or Federally Protected Wetlands The proposed Project would include changes to the LA River concrete lining and banks outside of the ordinary	Less than Significant	No mitigation measures are required.	Less than Significant

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
high-water mark of the LA River. A Waste Discharge Requirements (WDR) from the RWQCB and California Fish and Game Code Section 1602 Streambed Alteration Agreement would be required for temporary activities and fill. In addition, BMPs would be implemented to avoid impacts. There are no wetlands in the Project Area; therefore, there would be no operational impacts on wetlands.			
Cultural Resources			
V(a). Historical Resources Four historical resources were identified within the Project Area: Fourth Street Viaduct, Seventh Street Viaduct, the Los Angeles River, and the Downtown Los Angeles Industrial Historic District. The historic associations, design elements, and character defining features that convey the significance of the four historical resources in the Project Area would not be affected by the activities associated with the construction or operation of the proposed Project.	Less than Significant	No mitigation measures are required.	Less than Significant
V(b). Archaeological Resources There are no unique archaeological resources that would be affected by the Project as presently proposed. The Project Site is characterized by a moderate potential for buried archaeological deposits. Proposed construction activities have the potential to disturb deeply buried and intact prehistoric and historic archaeological resources. Archaeological monitoring would be conducted in certain portions of the Project Site. In the unlikely event that previously undisturbed archaeological resources are	Less than Significant (Construction) No Impact (Operation)	No mitigation measures are required.	Less than Significant (Construction) No Impact (Operation)

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
encountered during construction, all work in the vicinity would be halted until a qualified archaeologist can visit the site of discovery and assess the significance of the resource. Operation of the proposed Project would not involve any ground-disturbing activities. Therefore, there would be no potential to disturb, damage, or degrade an archaeological resource or its setting.			
V(c). Human Remains No human remains are known to exist in the Project Site, and the location does not encompass any formal cemeteries. However, the Project Area is sensitive for prehistoric Native American remains. In the unlikely event of an accidental discovery of any human remains, the City would comply with the process outlined in Health and Safety Code § 7050.5, § 15064.5(e) of the CEQA Guidelines, and PRC § 5097.98. Operation of the proposed Project would not involve any ground-disturbing activities. Therefore, no operational impacts on human remains would occur.	Less than Significant (Construction) No Impact (Operation)	No mitigation measures are required.	Less than Significant (Construction) No Impact (Operation)
XVIII. Tribal Cultural Resources The Project Area is sensitive for prehistoric Native American remains. A Native American monitor would be present to observe ground-disturbing activities. A tribal cultural resources sensitivity training would also be held for the construction contractor prior to construction activities. The City will continue working with the tribe in accordance with the requirements of Assembly Bill 52.	Less than Significant (Construction) No Impact (Operation)	No mitigation measures are required.	Less than Significant (Construction) No Impact (Operation)

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Operation of the proposed Project would not involve ground disturbing activities; therefore, operation of the proposed Project would not disturb prehistoric Native American remains nor cause an adverse change in the significance of a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American Tribe.			
Energy			
VI(a). Consumption of Energy Resources Proposed Project construction would require fuel consumption for haul trips, equipment use, and worker commute trips, which would represent a negligible increase in regional energy consumption. Best management practices related to air quality and greenhouse gas emissions would be implemented, which would contribute to reductions in energy consumption. Therefore, construction would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources. Operation of the proposed Project would result in an overall net reduction of long-term energy use when compared to the existing industrial land use. The proposed Project would conform with State and City Green Building Codes and would include design features that would reduce energy use, water use, and waste generation. Therefore, proposed Project operation would not result in a potentially significant environmental	Less than Significant	Implementation of air quality mitigation measures **MM-AQ-1** and **MM-AQ-2** would reduce impacts related to construction-related energy use. No further mitigation measures are required.	Less than Significant

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
impact due to wasteful, inefficient, or unnecessary consumption of energy resources.			
VI(b). State or Local Plans The proposed Project would include construction BMPs and operational design features that would improve energy efficiency. These energy-saving features would be consistent with the goals outlined in state and local energy plans. Therefore, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	Less than Significant	Implementation of air quality mitigation measure **MM-AQ-1** would reduce impacts related to construction-related energy use. No further mitigation measures are required.	Less than Significant
Geology and Soils			
VII(b). Soil Erosion or Loss of Topsoil. Soil excavation would be required during construction of the proposed Project. Standard BMPs would be implemented to ensure that substantial erosion or the loss of topsoil would not occur. Construction activities would comply with applicable permits and the City's Municipal Code. During operation of the proposed Project, the topography would be relatively flat, and open spaces would be landscaped or hardscaped. Therefore, substantial soil erosion and loss of topsoil are not anticipated.	Less than Significant	No mitigation measures are required.	Less than Significant
VII(c). Expansive Soils. The Project Area is underlain with gravels, sands, and cobbles, which tend to have a low potential for expansive soils. The Project Area is also underlain with fill material, which could expand when saturated. However, the proposed Project would follow standard engineering	Less than Significant	No mitigation measures are required.	Less than Significant

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
practices and recommendations identified in the *Geotechnical Site Investigation* (Hushmand Associates, Inc., 2018) to reduce the potential for hazards during construction and operation.			
VII(f). Paleontological Resources There are no significant paleontological resources that would be affected by the construction of the Project. If an unanticipated fossil discovery is made during Project construction, the City would comply with the Society of Vertebrate Paleontology (SVP) (2010) guidelines. Operation of the proposed Project would not involve any ground-disturbing activities. Therefore, there would be no potential to disturb, damage, or degrade a paleontological resource or its setting.	Less than Significant (Construction) Not Significant (Operation)	No mitigation measures are required.	Less than Significant (Construction) Not Significant (Operation)
Greenhouse Gas Emissions			
VIII(a). Generation of Greenhouse Gas Emissions Proposed construction activities would result in short-term annual GHG emissions. Proposed construction activities include various measures that would reduce short-term emissions from off-road equipment. The proposed Project would incorporate water-saving landscape irrigation features, energy-efficient lighting, and use of low-flow water fixtures per current California building code requirements. In comparison to business-as-usual conditions (without GHG-reduction measures) the proposed Project would result in GHG reductions.	Less than Significant	No mitigation measures are required.	Less than Significant
VIII(b). Conflict with Applicable Plan, Policy, or Regulation	Less than Significant	No mitigation measures are required.	Less than Significant

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Construction of the proposed Project includes various measures that would reduce short-term GHG emissions from off-road equipment. Therefore, proposed construction activities would not conflict with any applicable plans, policies, or regulations pertaining to reducing GHG emissions. The proposed Project would result in an overall net reduction of long-term operational GHG emissions in comparison to the existing industrial uses that were removed. Therefore, operation of the proposed Project would not conflict with any applicable plans, policies, or regulations pertaining to reducing GHG emissions.			
Hazards and Hazardous Materials			
IX(a). Routine transport, use, or disposal of hazardous materials Project construction would require the removal of contaminated soils and the use of construction materials that could be hazardous, which would potentially create a significant hazard to the public or the environment. The transport, use, and disposal of these materials would be conducted in compliance with applicable federal, state, and local laws pertaining to the safe handling, transport, and disposal of hazardous materials. The proposed Project may require the use of hazardous materials during operation, such as paint, pesticides, and fertilizers. Hazardous materials would be properly handled, contained, transported, and disposed of in compliance with applicable laws and regulations.	Potentially Significant	Implement **MM-HAZ-1. Remediation Category 1A** The City shall be required to implement the following measures in areas where Resource Conservation and Recovery Act (RCRA) Level Heavy Metals, polychlorinated biphenyls (PCB), or total petroleum hydrocarbon diesel range organics (TPH DRO) will be excavated and disposed of at Class 1 Hazardous Waste Landfills: • Soils will be excavated as needed up to a maximum depth of 4.5 feet below ground surface (bgs), consistent with the limits designated on **Figures 3.8-3a** and **3.8-3b**, Areas of Concern with Contamination. • The transport and disposal of RCRA hazardous waste will be accompanied with a Hazardous Waste Manifest (i.e., documentation	Less than Significant

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Therefore, operation of the project would not create a significant hazard to the public or the environment. There are potential health risks to construction workers and park users, primarily due to total petroleum hydrocarbons and lead in the soil. The Project Site would be remediated to standards acceptable by the Los Angeles County Fire Department (LACoFD) and other regulatory agencies as required. Under these standards, the concentrations of contaminants of concern would not pose health risks to construction workers or the public.		accompanying the transport, treatment, storage and disposal of hazardous waste) completed by a licensed transporter. A site-specific CalEPA Hazardous Waste Generator Identification Number will be obtained for each RCRA hazardous waste. Additional sampling and testing will likely be required by the facility accepting the soil for disposal. • For excavations deeper than 4 feet, shoring or other approved means will be required to maintain stability of the excavation walls. • During excavation activities, dust and runoff controls will be implemented to prevent windborne or surface waterborne migration of the soil from the Project Site. The soils will be directly loaded into the transport trucks, which will require tarps to prevent spillage or windblown loss of soil during transport. These controls will be verified and monitored by an independent third party. • A site-specific Health and Safety Plan (HASP) will be prepared and implemented during all proposed construction activities, including full time perimeter sampling and testing of particulates and dust from the Project Site. • All onsite workers and supervisors will complete a 40-hour Occupational Safety and Health Administration (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER) training course and be equipped	

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		with the appropriate personal protective equipment. • Excavated areas will be backfilled with certified clean soil. Implement **MM-HAZ-2. Remediation Category 2A** The City shall be required to implement the following measures in areas where soils contaminated with Heavy Metals and/or TPH DRO that are classified as non-RCRA hazardous waste will be excavated. These contaminated soils shall be disposed at Class 2 Landfills: • Soils will be excavated as needed up to a maximum depth of 6 feet bgs, consistent with the limits designated on **Figures 3.8-3a** and **3.8-3b**, Areas of Concern with Contamination. • The transport and disposal of non-RCRA hazardous waste will be accompanied with a Hazardous Waste Manifest completed by a licensed transporter. A CalEPA Non-RCRA Hazardous Waste Generator Identification Number will be obtained. Additional sampling and testing will likely be required by the facility accepting the soil for disposal. • For excavations deeper than four feet, shoring or other approved means shall be required to maintain stability of the excavation walls. • During excavation activities, dust and runoff controls will be implemented to prevent windborne or surface waterborne migration of	

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		the soil from the Project Site. The soils will be directly loaded into the transport trucks, which will require tarps to prevent spillage or windblown loss of soil during transport. These controls will be verified and monitored by an independent third party. • A site-specific HASP will be prepared and implemented during all proposed construction activities, including full time perimeter sampling and testing of particulates and dust from the Project Site. • All onsite workers and supervisors will complete a 40-hour OSHA HAZWOPER training course and be equipped with the appropriate personal protective equipment. • Excavated areas will be backfilled with certified clean soil. Implement **Remediation Category 2B:** In addition to the measures above, the following measures shall be implemented in areas where VOCs were observed in soil gases: • Emission controls will be used to clear the area of emitting VOCs (i.e., spraying water or applying foam agents to all exposed soil surfaces and/or using large, spark-free fans). Full-time monitoring will be required to verify that the emission controls are effective in preventing the VOCs from impacting workers or the public. Monitoring will comply with SCAQMD Rule 1166.	

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		• A detailed HASP will be prepared and implemented during the excavation and transport of contaminated soils. • The excavation, transport, and disposal of contaminated soils will require permitting and approval by the CUPA, CalEPA/DTSC, and SCAQMD. A detailed Work Plan/Remedial Action Plan will be prepared and submitted to these agencies for review and approval. Under Rule 1166, a Mitigation Management Plan for potential VOC emissions during excavation will be submitted to SCAQMD and subject to SCAQMD approval. A site-specific CalEPA Hazardous Waste Generator Identification Number will be obtained and manifests completed by the licensed transporter. • A soil vapor extraction (SVE) system will be designed and installed to remove and treat VOCs in the soil gases. If Health Risk Assessments indicate the need, a vertical barrier/line will be installed around the perimeter of the area to prevent soil gases with VOCs from migrating back into the area. Gases migrating from below the clean backfill or deeper depths will be extracted through the SVE slotted wells and treated by the SVE treatment system. Treatment for VOCs typically involves carbon filtration unless hydrogen sulfide is detected in the gas stream. Operating and maintenance procedures for the SVE system and permit applications will be	

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		prepared and approved by the oversight agency and SCAQMD. • If the City determines it is necessary, a "Pilot Study" will be designed and implemented to evaluate the sustainable flow rate and concentration of VOCs in the soil gas stream and to determine the size of the final SVE system components. • Design of the SVE system, preparation of a Design Report and Work Plan/Remedial Action Plan (including HASP) will be submitted to and subject to approval by the CUPA and LACoFD Site Mitigation Unit. • The SVE will be implemented and monitored. This may require several months to over a year. • The City shall provide documentation to the CUPA, LACoFD Site Mitigation Unit, and SCAQMD when the SVE has reached the specified clean-up goals. • Excavated areas will be backfilled with certified clean soil. Implement **MM-HAZ-3. Remediation Category 3** The City shall be required to implement one of the following three options in areas where no heavy metals were observed, but VOCs were observed in soil gas: • Option 1: This alternative will involve the same measures as described under Category 2b above. Contaminated soils will be removed to a depth of	

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		up to 15 feet or more and shoring of the excavation walls will be necessary. A liner will be installed on the bottom of the excavation area to prevent contaminated soil gas from re-entering the backfill soils. Gas migration from the side walls will be mitigated by either installation of a vertical liner placed on the side walls of the excavation or SVE wells installed vertically outside the limits of the excavation after backfilling is done. The backfill soil will be certified clean fill and placement will need to meet the geotechnical specifications of the proposed Project design. During the process, the site will require strict emissions controls and monitoring. • Option 2: This alternative, the SVE treatment method, utilizes extraction and monitoring wells (In Situ Method) or excavation and encapsulation of impacted soils in above ground piles with horizontal slotted piping (On Site Method), a vacuum pump or pumps, and carbon filtration units to extract and remove VOCs from the soil gas. The process requires several steps as follows: 1. Design and implementation of a "Pilot Study" to evaluate the sustainable flow rate and concentration of VOCs in the soil gas stream and to size the final SVE system components.	

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		2. Design of the SVE system, preparation of a Design Report and Work Plan/Remedial Action Plan (including HASP) for submittal to and approval by the CUPA and CalEPA/DTSC. 3. Solicitation of bids for construction and implementation of the remediation. 4. Implementation and monitoring of the SVE. This may require several months to over a year. 5. Reporting to the agencies with documentation that the SVE has reached the specified clean up goals. • Option 3: This alternative will mitigate the impact of the VOCs and/or methane and hydrogen sulfide by precluding soil gases migration from the subsurface soil and intrusion into structures or other facilities and surface emissions. Depending on the type of soil gases and pressure in the soil gas, the systems can include several of the following components: o Shallow excavation (three to four feet below ground surface [bgs]) to allow installation of the mitigation components (some of the soil will be used to backfill trenches) o Gravel layers and slotted piping for gas collection o Liner installation above the slotted piping and extending side wide	

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		○ Vacuum pumps for gas extraction or air injection blowers ○ Filtration systems to remove VOCs and/or hydrogen sulfide from the gas stream ○ Geomembrane barriers placed beneath concrete slabs and/or foundations or fill areas ○ Installation of automated and/or manual monitoring systems Implement **MM-HAZ-4. Remediation Category 4** The City shall be required to implement the following measure in areas within Caltrans ROW where soil contains ADL: • In accordance with the Caltrans/DTSC ADL Agreement, soils above a depth of approximately 2.9 feet bgs will require one foot of clean soil cover to remain on site per the Caltrans/DTSC ADL Agreement. Implement **MM-HAZ-5. Soil Gas Sampling** Additional soil gas sampling and testing is recommended for completion in PARC Areas 1A, 5, 6, 7, and 8. The additional sampling could potentially eliminate or reduce the need for soil gas remediation. Ambient air and soil gas samples shall be tested for VOCs. If soil gas samples in PARC Area 6 yield ILCR values below the *de minimis* risk target or within the risk management range, no further mitigation and/or remedial actions will be required. If ILCR values are above the *de minimis* risk target, additional remedial	

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		actions will be taken to lower values to within the risk management range, such as applying SVE to a maximum depth of 15 to 20 feet bgs.	
IX(d). Located on a hazardous materials site There are no Hazardous Waste and Substances Sites in the Project Area that are included on the Cortese List (Government Code Section 65962.5). However, areas in the Project Site are underlain with contaminated soils, which would potentially create a significant hazard to the public or the environment. The Project Site would be remediated to standards acceptable by LACoFD and other regulatory agencies as required. Under these standards, the concentrations of contaminants of concern would not pose health risks to construction workers or the public.	Potentially Significant	Implement **MM-HAZ-1** through **MM-HAZ-5** described above. Implement **MM-HAZ-6. Methane Mitigation and Testing** Methane mitigation applies to PARC Area 1A, which is located within the Methane Zone, and portions of PARC Area 7, where soil gases were detected and impervious surfaces are to be constructed adjacent to existing buildings. Any buildings (except naturally vented) to be constructed in Area 1A shall have methane mitigation systems meeting Level II requirements involving membrane and passive venter per Table 71, unless additional testing indicates no subsurface gas pressure and lower methane concentrations. In addition, paved areas that are over 5,000 square feet in area and within 15 feet of the exterior wall of a commercial, industrial, institutional building, shall be vented in accordance with the Methane Mitigation Standards, design Level II, unless additional testing indicates no subsurface gas pressure and lower methane concentrations. Additional testing for methane concentrations and subsurface pressure shall be completed in accordance with the Division 71 Methane Seepage Regulations testing requirements should any buildings or paved areas over 5,000 square feet be proposed in PARC	Less than Significant

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		Area 1A and in PARC Area 7 where methane was detected.	
Hydrology and Water Quality			
X(b). Groundwater supplies and groundwater recharge Groundwater is not anticipated to be encountered during excavation activities for the proposed Project. If groundwater is encountered, the contractor would develop a dewatering plan, and a Dewatering Permit with the Los Angeles RWQCB would also be required. The proposed Project would result in the net addition of 1.4 acres of impervious surfaces; however, the increase would not substantially deplete groundwater supplies or interfere with groundwater recharge such that the proposed Project may impede sustainable groundwater management of the basin.	Less than Significant	No mitigation measures are required.	Less than Significant
X(c)(i). Substantial erosion or siltation Grading, excavation, and trenching during construction would result in temporary changes to the drainage pattern of the Project Site. These construction activities would result in erosion and sediment transport, which could increase pollutants in stormwater runoff and receiving waters. To minimize erosion and siltation, the Project Site would be graded to divert water into existing drainages and catch basins. The proposed Project would comply with the provisions of the NPDES MS4 Permit and implement a stormwater pollution prevention plan (SWPPP), which would include BMPs to control erosion and siltation. The proposed Project would comply with all	Less than Significant	No mitigation measures are required.	Less than Significant

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
applicable federal, state, and local requirements to reduce the potential for erosion and siltation onsite and offsite. Post-construction stormwater management measures would be installed to control pollutants and runoff generated during operation of the proposed Project. Runoff from the Project Site would be captured by proposed stormwater drainage systems, routed to low impact development (LID) BMPs, and discharged to the existing stormwater drainage facilities adjacent to the site. In addition, the Project Site would include hardscaped and landscaped areas to provide soil stability and further minimize erosion. With incorporation of these stormwater management measures, the proposed Project is not expected to result in substantial erosion or siltation onsite or offsite.			
X(c)(ii). Flooding on- or off-site The proposed Project would result in the net addition of 1.4 acres of impervious surfaces. Therefore, the rate and amount of surface runoff from the Project Site is expected to marginally increase. However, the Project Site would be graded to prevent flooding onsite or offsite. In addition, the proposed Project would implement the minimum construction BMPs included in the MS4 permit to further minimize the potential for flooding. If dewatering is required or if work is performed during the rainy season, the project would comply with comply with all applicable federal, state, and local requirements. Because the proposed Project would increase the impervious surface area of the Project Site, it could increase the potential for flooding onsite or offsite during	Less than Significant (Construction) Potentially Significant (Operation)	Implement **MM-HYDRO-1: Public Safety Plan** Prior to Final Plan approval, the City, in coordination with USACE, shall publish a Public Safety Plan in order to reduce the potential for safety impacts related to flooding. The Public Safety Plan shall include an evacuation plan and protocols for protecting pedestrians and potential homeless populations (e.g., vehicular deterrents such as bollards and safety warning devices) in the LA River Access Tunnel during flood conditions.	Less than Significant

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
operation. However, the proposed Project would include the installation of storm drainage systems to convey runoff to the existing systems. The existing main line systems had sufficient capacity to convey runoff from the Project Site when it was fully developed with nearly 100 percent impervious surface cover (prior to the construction of the Viaduct Replacement Project). Therefore, the potential for flooding onsite or offsite would be reduced.			
X(c)(iii). Create or contribute runoff water The proposed Project would result in the net addition of 1.4 acres of impervious surfaces. Therefore, runoff from the Project Site is expected to increase over the course of construction and during operation. However, the proposed Project would include the installation of storm drainage systems to convey runoff to the existing systems. The existing main line systems had sufficient capacity to convey runoff from the Project Site when it was fully developed with nearly 100 percent impervious surface cover (prior to the construction of the Viaduct Replacement Project). Therefore, the proposed Project would not contribute runoff water that would exceed the capacity of existing stormwater drainage systems or provide substantial additional sources of polluted runoff.	Less than Significant	No mitigation measures are required.	Less than Significant
X(c)(iv). Impede or redirect flood flows Though the majority of construction staging would be confined to areas outside of the LA River, construction activities for the proposed concrete terracing would occur within the 100-year flood hazard area. To minimize	Less than Significant	No mitigation measures are required.	Less than Significant

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
impacts related to flooding, work within the LA River would be performed during the dry season and a water diversion plan would be developed if work is performed during the rainy season. The proposed Project would place structures that would impede or redirect flood flows within a 100-year flood hazard area. However, the proposed terracing is not anticipated to impact flooding within the LA River because of the reduced water surface elevation from the removal of the existing Sixth Street Viaduct as part of the Viaduct Replacement Project.			
X(e). Water quality control plan or sustainable groundwater management plan Proposed construction activities would comply with all applicable federal, state, and local requirements. Therefore, the proposed Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	Less than significant	No mitigation measures are required.	Less than significant
WQ-3. G.1 Surface Water Hydrology Because proposed construction activities within the LA River would be performed during the dry season, impacts related to flooding during the projected 50-year developed storm event would be minimized. If work is performed during the rainy season (October through April), a water diversion plan would be developed to reduce the potential for flooding that would harm people or damage properties and sensitive biological resources. The proposed Project would result in a relatively small addition of impervious surfaces (1.4 acres), which would	Less than Significant (Construction) Potentially Significant (Operation)	Implement **MM-HYDRO-1: Public Safety Plan** Prior to Final Plan approval, the City, in coordination with USACE, shall publish a Public Safety Plan in order to reduce the potential for safety impacts related to flooding. The Public Safety Plan shall include an evacuation plan and protocols for protecting pedestrians and potential homeless populations (e.g., vehicular deterrents such as bollards and safety warning devices) in the LA River Access Tunnel during flood conditions.	Less than Significant

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
not substantially reduce or increase the amount of surface water in the LA River. The proposed Project could marginally increase flood levels during the 50-year design storm event. However, as discussed above, the proposed terracing is not anticipated to impact flooding within the LA River due to the removal of the existing Sixth Street Viaduct. The proposed Project would include safety measures to prevent the public from entering the LA River during a storm event. In addition, the City will develop a public safety plan to further minimize impacts related to flooding.			
WQ-7. G.4 Groundwater Quality The handling, storage, and disposal of contaminated soils would comply with all applicable federal, state, and local requirements. The Project Site would be remediated to standards acceptable by LACoFD and other regulatory agencies as required, thereby reducing the area affected by contaminants. Proposed construction activities would not worsen the existing contamination. In addition, proposed construction activities would comply with all applicable federal, state, and local requirements to reduce the potential for the release of contaminants into groundwater and to ensure that pollutants from construction would not substantially degrade water quality. The proposed Project would implement BMPs to prevent, control, and reduce stormwater pollutants. Therefore, the proposed Project would not contaminate sources of drinking water.	Less than Significant	No mitigation measures are required.	Less than Significant

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
The proposed Project may require the use of hazardous materials during operation. The handling, storage, and disposal of hazardous materials would comply with all applicable federal, state, and local requirements to reduce the potential for the release of contaminants into groundwater. In addition, the proposed Project would implement LID BMPs to prevent, control, and reduce stormwater pollutants. Therefore, the proposed Project would not contaminate groundwater.			
Land Use and Planning			
XI(b). Conflict with applicable land use plan, policy, or regulation The proposed Project is consistent with the the land use plans, policies, and regulations in the area. Proposed construction activities would not result in zoning or land use changes, or a revision to any of the adopted plans or policies at the local and regional levels. All anticipated permits and approvals would be obtained prior to proposed construction activities and any necessary land use entitlements would be secured prior to the start of construction activities. Proposed construction activities would be conducted in compliance with the City's development requirements, State building standards, and all applicable construction and building permits. The proposed Project is considered a “Park or Playground (Open outdoor space), operated by government agency” land use, which would be permitted in the portions of the Project Area zoned M1, M2, M3, and OS, and would require approval from the City within areas zoned PF. In addition, the proposed Project would conform to the	Less than Significant	No mitigation measures are required.	Less than Significant

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
development regulations for the River Improvement Overlay District. LABOE would continue to work with the Los Angeles Department of City Planning to ensure that the proposed Project is consistent with future zoning changes.			
Noise and Vibration			
XIII(a). Ambient noise levels Project construction would not result in a significant increase in daytime ambient noise levels at the nearest noise-sensitive land uses. In addition, proposed construction activities would not be anticipated to result in a substantial increase in traffic noise levels along area roadways that would adversely impact noise-sensitive land uses. However, noise levels from individual pieces of equipment could potentially exceed the allowable noise level stated in the Los Angeles Municipal Code (LAMC). Construction activities would be limited to between the hours outlined in the LAMC, but would be permissible outside of these hours upon approval by the engineer. Implementation of the proposed Project would not result in a significant increase in traffic noise levels under either existing or future cumulative conditions because of the removed industrial land uses. In addition, operational noise levels at the nearest residential land uses would not exceed the "normally acceptable" noise level of 65 dBA CNEL.	Potentially Significant (Construction) Less than Significant (Operation)	Implement **MM-NOISE-1: Construction-Noise Management Plan** A construction-noise management plan (CNMP) shall be prepared for the proposed Project. The CNMP shall, at a minimum, include the following measures: • Construction activities shall be restricted outside the hours of 7:00 a.m. to 9:00 p.m. Monday through Friday, and between the hours of 8:00 a.m. to 6:00 p.m. on Saturdays. While the intention is not to conduct work on Sundays, occasional Sunday work may be required to ensure the proposed Project schedule is met. If it is determined that Sunday work is necessary, the proper permits will need to be obtained through the Police Commission. Construction activities shall be prohibited on federal holidays. • Construction equipment shall be properly maintained and equipped with mufflers. • Equipment shall be turned off when not in use for an excess of five minutes, except for equipment that requires idling to maintain performance.	Less than Significant (Construction and Operation)

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		• A public liaison shall be appointed for project construction and shall be responsible for addressing public concerns about construction activities, including excessive noise. As needed, the liaison shall determine the cause of the concern (e.g., starting too early, bad muffler) and implement measures to address the concern. The liaison will work directly with the construction contractor to ensure implementation of the noise control plan. • The liaison will work directly with the construction contractor to ensure implementation of the noise control plan. • The public shall be notified in advance of the location and dates of construction hours and activities. • Where necessary, temporary sound barriers shall be installed. • Signage and notification on where to report construction-generated noise shall be posted on-site and around the construction area, as well as on the Bureau of Engineering website. • Staging and queuing areas shall be located at the furthest distance possible from nearby residential land uses, as well as any other noise-sensitive land uses identified in the Project Area at the time of construction (e.g., transient lodging, schools, libraries, churches, hospitals, and nursing homes).	

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		• Limit noise/vibration intensive activities occurring within ten feet of existing structures and occupied land uses. Where possible and to the extent locally available, select low-noise/vibration generating equipment when activities occur within ten feet of adjacent existing structures.	
XIII(b). Excessive groundborne vibration or groundborne noise levels During proposed construction activities, on-road heavy-duty trucks would not generate substantial increases in groundborne vibration that would exceed commonly applied criteria for structural damage or annoyance. Proposed Project operations would not include the use of machinery or equipment that would contribute to excessive groundborne noise or vibration levels.	Less than Significant	No mitigation measures are required.	Less than Significant
Population and Housing			
XIV(a). Induce substantial population growth The proposed Project would not construct new homes or businesses in the Project Area or result in the extension of roads or other infrastructure to undeveloped areas. Construction activities would be temporary and would be limited to the construction site in a heavily developed industrial and commercial area. Operation of the proposed Project may include one or more office/community/concession building(s); however, there are limited business sites available within the Project Site. Because the areas in the vicinity of the Project Area are already highly developed, the proposed Project would not result in the extension of roads or	Less Than Significant	No mitigation measures are required.	Less Than Significant

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
infrastructure to undeveloped areas. Therefore, the proposed Project would not result in population growth in the Project Area.			
Public Services			
XV(a). Physical impacts associated with the new or physically altered governmental facilities: *Fire Protection* Construction site hazards could increase the risk of personal injury and fires. In addition, lane and road closures could affect fire protection services. However, proposed construction activities would comply with health and safety requirements and building and fire code standards. The nearest Los Angeles Fire Department (LAFD) responders would be notified to coordinate emergency response routing during construction. Emergency vehicles would continue to have the right-of-way, and emergency vehicle response would not be substantially affected. Construction of additional facilities is not expected to be required to maintain acceptable service ratios, response times, or other performance objectives for fire protection. The proposed Project would incorporate LAFD recommendations and comply with applicable standards and permits, including Fire Code requirements regarding fire department access, response distances, and fire-flow. Therefore, operation of the proposed Project is not expected to result in the need for the expansion of or construction of new fire protection facilities. *Police Protection*	Less than Significant (Construction) Potentially Significant (Operation)	There are no mitigation measures for Public Services. The mitigation measures identified in the Transportation section below address impacts associated with traffic concerns during operation of the proposed Project.	Less than Significant (Construction and Operation)

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Lane or road closures and the movement of construction equipment on local roads could affect police protection services during proposed construction activities. However, the nearest Los Angeles Police Department (LAPD) station would be notified to coordinate emergency response routing during construction. Law enforcement vehicles would continue to have the right-of-way, and police response would not be substantially affected. Construction of additional facilities is not expected to be required to maintain acceptable service ratios, response times, or other performance objectives for police protection. Operation of the proposed Project could increase the demand for LAPD services. Project plans were reviewed by the LAPD, and the proposed Project would be required to incorporate LAPD recommendations in the final design. Police protection services in the park would be covered by the existing park ranger system and LAPD, as mandated in the existing memorandum of understanding between LAPD and RAP. Large events would require approval from the LAPD, and any additional permits or requirements. The proposed Project is not expected to result in the need for the expansion of or construction of new police protection facilities. *Parks* Construction and operation of the proposed Project would not result in population growth or substantial employment growth that would increase the demand for existing parks or other recreational facilities in the Project Area. Rather, the proposed Project would provide			

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
additional recreation and park services that may alleviate the demand for other existing parks and recreational facilities in the surrounding communities.			
Recreation			
XVI(a). Physical deterioration of neighborhood and regional parks or other recreational facilities The proposed Project does not include the construction of housing and construction workers would commute to the job site on a daily basis. Therefore, temporary construction of the proposed Project would not result in population growth that would increase the number of visitors to existing parks or other recreational facilities. The proposed Project would not result in population growth or substantial employment growth that would increase the demand for existing parks or other recreational facilities in the Project Area. In addition, the proposed Project would provide additional recreation and park services that may alleviate the demand for other existing parks and recreational facilities in the vicinity of the Project Area. Therefore, the deterioration of existing facilities is not anticipated to occur or be accelerated.	Less than Significant	No mitigation measures are required.	Less than Significant
REC-2. Recreational facilities that might gave an adverse physical effect on the environment The Project Area is currently a construction site located in a highly developed urban environment. Therefore, the proposed Project would not result in the destruction of the natural environment or alteration of landforms that would have physical impacts on the environment. Rather, the proposed Project would improve the natural	Less than Significant	No mitigation measures are required.	Less than Significant

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
environment by providing more open space and remediating hazardous soils to standards acceptable by LACoFD and other regulatory agencies as required.			
REC-3. Demand for recreation and park services anticipated at the time of project buildout The proposed Project would not result in population growth or substantial employment growth that would increase the demand for existing parks or other recreational facilities in the Project Area. In addition, the proposed Project would provide additional recreation and park services that may alleviate the demand for other existing parks and recreational facilities in the vicinity of the Project Area.	N/A (Construction) Less than Significant (Operation)	No mitigation measures are required.	N/A (Construction) Less than Significant (Operation)
Transportation/Traffic			
T-1. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities Construction-generated traffic would be dispersed over multiple roadways, present for the short-term, and scheduled with increased frequency during off-peak hours. Public transportation facilities would not be affected, and temporary detours would be provided for any affected pedestrian and bicycle facilities. Therefore, construction activities would not conflict with adopted policies, plans, or programs supporting alternative transportation. Operation of the proposed Project would provide facilities that would encourage active modes of transportation (i.e., bike/pedestrian ramps and stairs, bike racks, and space	Less than Significant	No mitigation measures are required.	Less than Significant

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
for future bike parking and bikeshare). In addition, the proposed Project would not exceed the capacity of the existing circulation system during a typical day. Site-specific traffic control plans would be developed during large special events.			
T-2.1. For a land use project, would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)(1)? Would the project cause substantial vehicle miles traveled?	Less than significant	No mitigation measures are required.	Less than significant
T-3. Substantially increase hazards due to a geometric design feature or incompatible use	Less than significant	No mitigation measures are required.	Less than significant
T-4. Conflict with an applicable congestion management program, including, but not limited to, level-of-service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways Construction activities would generate up to approximately 80 trips per day, which may result in temporary impacts to the circulation system. The construction traffic impacts associated with the proposed Project would be limited to the construction period, and dispersed over multiple roadways, and distributed throughout the day. Access would be maintained through detour routes and no impacts would occur to bus services. On-street parking would be temporarily affected; however, other street parking in the surrounding area would continue to remain available. Therefore, proposed construction activities would not conflict with an applicable congestion management program.	Less than Significant (Construction) Potentially Significant (Operation)	Implement **MM-TRANS-1: Mobility Hub** The City shall reserve space for a mobility hub at the proposed Project Site, including additional amenities for bicyclists, drivers, and transit users, to encourage event attendees to use alternative modes of transportation. Implement **MM-TRANS-2: Bicycle Facilities** The City shall reserve space for a Bike Share hub at the proposed Project Site to allow Bike Share participants to dock bicycles and scooters. Implement **MM-TRANS-3: Rideshare Zones** The City shall create permanent rideshare pick-up and drop-off zones for the East Park and West Park. Rideshare pick-up/drop-off zones could be located on South Santa Fe Street adjacent to the proposed West Park and South Mission Road adjacent to the proposed East Park. The pick-up/drop-off zones shall	Less than Significant

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
Operation of the proposed Project would result in less trips than the existing land use; therefore, operational activities would not exceed the capacity of the existing circulation system. Large special events, which would occur infrequently, would increase the number of trips generated, which could result in impacts on the existing circulation system. However, large event permittees would be required to develop site-specific traffic control plans. Proposed and existing parking spaces would not meet the anticipated parking demand during operation of the proposed Project. In addition, large events, which would occur infrequently, could result in impacts on parking.		be clearly marked, and wayfinding signage shall be installed throughout the proposed Project Site. Implement **MM-TRANS-4: Public Transportation** The City shall reserve space at the proposed Project Site to ensure access through the Arts Plaza or adjacent sidewalk to a future Sixth Street Metro Station.	
Utilities and Service Systems			
XIX(a). Significant environmental effects from construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities. The Project Area does not include sensitive biological resources or properties located within special flood hazard areas subject to inundation. The proposed construction site would not be accessible to the public. A water diversion plan or flood evacuation plan would be developed if construction activities are performed during the rainy season. Wastewater generated during proposed construction activities would be collected, screened, and discharged in accordance with the SWPPP and any remaining waste	Less than Significant (Construction) Potentially Significant (Operation)	Implement **MM-HYDRO-1** described under Hydrology and Water Quality above.	Less than Significant

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
would be disposed of in accordance with applicable water and solid waste disposal regulations. The proposed Project includes the construction of new stormwater drainage systems to capture and route runoff from the Project Site to LID BMPs. Proposed stormwater drainage systems and BMPs would comply with all applicable permits, design standards, and regulations to reduce significant impacts. The proposed Project would require construction of new utility connections, relocations and undergrounding of utilities, and other utility improvements. The City would coordinate with service providers to ensure that there are no disruptions in utility services. Though operation of the proposed Project would result in additional water consumption and wastewater generation, the construction of new water or wastewater treatment facilities or the expansion of existing facilities is not anticipated. The irrigation system would be designed to receive recycled water. LID and structural treatment BMPs would be installed to treat captured rainfall and runoff for pollutants of concern. A public safety plan would be developed to reduce the potential to harm people during operation of the proposed Project. Therefore, the proposed Project is not anticipated to cause flooding during the projected 50-year developed storm event that would have the potential to harm people or damage property or sensitive biological resources.			

Environmental Impact	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
XIX(b). Sufficient water supplies There are sufficient water supplies available to serve the water required for proposed construction activities and new or expanded entitlements would not be required. The proposed Project would implement design features to reduce the consumption of water resources. Operation of the proposed Project would require approximately 20.16 acre-feet of water per year, which is approximately .004 percent of existing LADWP water usage. In addition, the irrigation system for the proposed Project would accommodate recycled water. The proposed Project is not expected to require expanded entitlements.	Less than Significant	No mitigation measures are required.	Less than Significant

Table ES-4: Best Management Practices

Environmental Resource	Best Management Practices
Aesthetics	**BMP-AES-1: Construction Lighting** If nighttime lighting at the construction site is required, lighting shall be directed downward, on-site, and away from surrounding land uses. **BMP-AES-2: Construction Staging and Construction Staging Area** Construction staging shall be coordinated with the construction of the Viaduct Replacement Project; therefore, additional use or acquisition of public space for equipment and vehicles will not be required. The construction area shall be fenced to obscure views of construction activities, materials, and staged equipment. **BMP-AES-3: Operational Lighting** Outdoor lighting for recreational activities shall be limited to the proposed operating hours. **BMP-AES-4: Regulatory Requirements for Lighting** • Proposed Project illumination shall comply with the provisions in the City's Municipal Code, including LAMC Chapter 1, Article 2, Sec. 12.21A5(k); LAMC Chapter 1, Article 7, Sec. 17.08C; and LAMC Chapter 9, Article 3, Section 93.0117. • The new walkway lighting shall be compliant with all regulations set forth by the City's Bureau of Street Lighting Design Standards and Guidelines to ensure that the area receives lighting that meets national illumination standards for vehicular and pedestrian traffic, does not emit light pollution, and produces little glare. • Lighting for sports fields and courts shall operate in compliance with Los Angeles City Recreation and Parks (RAP) illuminance level standards for outdoor sports and recreational facilities. • Lighting for security shall be illuminated in accordance with the Illuminating Engineering Society (IES) standards, IES RP-33-14 *Lighting for Exterior Environments* and IES G-1-03 *Security Lighting for People, Property and Public Spaces*, as updated by IES G-1-16 *Guide for Security Lighting for People, Property and Critical Infrastructure*.

Air Quality	**BMP-AQ-1: SCAQMD Rules and Regulations** The contractor shall implement measures to ensure that all construction activities are consistent with SCAQMD rules and regulations. **BMP-AQ-2: Construction Worker Incentives** The City shall offer ride-share and transit incentives for construction workers to reduce emissions associated with motor vehicle use. **BMP-AQ-3: Construction Equipment Maintenance** The contractor shall maintain construction equipment by conducting regular tune-ups according to the manufacturers' recommendations.
Biological Resources	**BMP-BIO-1: Pre-Construction Wildlife Surveys** Pre-construction wildlife surveys shall be completed by a qualified biologist no more than 48 hours prior to clearing, grubbing, or other construction activities to determine the presence/absence of wildlife species, including special-status species, within 100 feet of the construction area. Special attention will be focused on any existing burrowing, roosting, and nesting habitat within the Project Area. Surveys shall be repeated if construction activities are suspended for five days or more. If any wildlife species are identified, appropriate BMPs shall be developed and implemented to reduce potential impacts on these species, in consultation with regulatory agencies where appropriate. **BMP-BIO-2: Trash and Construction Debris Removal** All trash and construction debris shall be removed from the LA River construction areas on a daily basis. All water quality BMP materials shall be properly maintained during project construction, and removed upon completion of construction activities. After completion of proposed construction activities, all construction equipment and materials shall be removed from the Project Area, and the Project Area shall be returned to pre-project conditions. **BMP-BIO-3: Work Area Limitations** No work for the proposed Project shall be conducted on the Fourth Street Bridge or Seventh Street Bridge structures. **BMP-BIO-4: Nesting Bird Survey** If vegetation trimming or clearing is conducted during the nesting season (typically February 15 through September 15), nesting bird surveys shall be completed by a qualified biologist within 300 feet of potential bird-nesting areas and 500 feet of potential

	raptor-nesting areas no more than 48 hours prior to trimming/removal activities to determine if nesting birds are within the affected vegetation. Surveys shall be repeated if trimming or removal activities are suspended for five days or more. **BMP-BIO-5: Nesting Bird Buffer** If nesting birds protected under the MBTA and California Fish and Game Code Sections are found in the Project Area, appropriate buffer consisting of orange flagging/fencing or similar (typically up to 300 feet for songbirds and 500 feet for raptors shall be installed and maintained until nesting activity has ended, as determined in coordination with the project biologist and regulatory agencies, as appropriate, to ensure that nesting birds and active nests are not harmed. **BMP-BIO-6: Hazardous Material BMPs** Appropriate hazardous material BMPs shall be implemented to reduce the potential for chemical spills or contaminant releases into the LA River, including any non-stormwater discharge. **BMP-BIO-7: Equipment Maintenance** All equipment refueling and maintenance shall be conducted in the staging area. In addition, vehicles and equipment shall be checked daily for fluid and fuel leaks, and drip pans shall be placed under all equipment that is parked and not in operation. **BMP-BIO-8: Regulatory Permits** The City shall consult with the appropriate responsible resource agency (e.g., CDFW and RWQCB) to determine permanent and temporary impact areas. Prior to undertaking ground-disturbing activities within or immediately adjacent to any aquatic resource areas, the City and/or their consultant shall obtain a CWA Section 401 Water Quality Certification, and California Fish and Game Code Section 1602 Streambed Alteration Agreement. **BMP-BIO-9: Pre-Construction Bat Surveys** At least 30 days prior to construction, alterations to the LA River Access Tunnel shall be surveyed by a qualified biologist to assess the presence of bats or potential bat-roosting cavities. If bats or bat-roosting cavities are identified, then during the non-breeding and active season (typically October), bats shall be safely evicted, to the extent feasible, under the direction of a qualified biologist. Once it has been determined that all roosting bats have been safely evicted from roosting cavities, exclusionary devices shall be installed and maintained where appropriate to prevent bats from roosting in these cavities prior to construction. **BMP-BIO-10: Monitoring During LA River Access Tunnel Alteration** In the event that all bats are not able to be excluded from affected roosting habitat, a qualified biologist shall monitor LA River Access Tunnel alterations. If bats are disturbed, work shall be safely suspended until all bats leave the vicinity on their own, or alternative measures can be identified under the direction of a qualified biologist. Work shall resume only once the bats have left the site and/or approval to resume work is given by a qualified biologist.

	BMP-BIO-11: Bat Monitoring In the event that all bats are not able to be excluded from affected roosting habitat, a qualified biologist shall monitor structure alteration activities. If bats are disturbed, work shall be safely suspended until all bats leave the vicinity of the LA River Access Tunnel on their own, or alternative measures shall be identified under the direction of a qualified biologist. Work shall resume only once the bats have left the site and/or approval to resume work is given by a qualified biologist. Surveys and exclusion measures are expected to prevent maternal colonies from becoming established in structures to be removed or altered. In the event that a maternal colony of bats is found, no work shall be conducted within 100 feet of the maternal roosting site until the maternal season is over or the bats have left the site, or as otherwise directed by a qualified biologist. The site shall be designated as a sensitive area and protected as such until the bats have left the site. No activities shall be authorized adjacent to the roosting site. Combustion equipment, such as generators, pumps, and vehicles, shall not be parked or operated under or adjacent to the roosting site. Construction personnel shall not be authorized to enter areas beneath the colony, especially during the evening exodus.
Cultural Resources	**BMP-CUL-1: Archaeological Monitoring During Excavation** A qualified archaeological monitor shall conduct archaeological monitoring in the West Park and East Park for excavations at depths greater than 5 feet. Monitoring efforts may be reduced or eliminated for those portions of the Project Area shown to have been recently disturbed by construction activities associated with the Sixth Street Viaduct Project. **BMP-CUL-2: Tribal Cultural Resources Sensitivity Training** The City shall invite a qualified tribal representative from the Gabrieleño Band of Mission Indians to a pre-construction meeting to provide a training session to the construction contractor regarding potential tribal resources that could be encountered during construction activities and procedures to follow should a tribal resource be encountered. **BMP-CUL-3: Tribal Cultural Resources Monitoring During Excavation** The City shall retain and compensate for the services of a Tribal monitor who is both approved by the Gabrieleño Band of Mission Indians-Kizh Nation Tribal Government and is listed under the NAHC's Tribal Contact list for the Project Area. The Tribal monitor shall only be present on-site during the construction phases that involve ground-disturbing activities in the proposed Arts Plaza. Monitoring efforts may further be reduced or eliminated for those portions of the in the proposed Arts Plaza that (1) are underlain with artificial fill of known origin, (2) require superficial scraping of land at depths less than five feet, or (3) are demonstrated to have been recently disturbed by construction activities associated with the Sixth Street Viaduct Project. The on-site monitoring shall cease when the grading and excavation activities in the proposed Arts Plaza are completed, or when the Tribal representatives and monitor have indicated that the site has a low potential for impacting tribal cultural resources. **BMP-CUL-4: Unanticipated Discovery of Archaeological and Tribal Cultural Resources** In the event that potentially significant buried archaeological materials are encountered within the Project Area, all work in the vicinity must stop until the archaeological and Tribal monitor can visit the site and assess the significance of the resource. If the

	resources are Native American in origin, the Gabrieleño Band of Mission Indians-Kizh Nation shall coordinate with the City regarding treatment and curation of these resources. Work may continue on other parts of the Project Area while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section 15064.5 [f]). **BMP-CUL-5: Unanticipated Discovery of Human Remains** Health and Safety Code Section 7050.5, Section 15064.5(e) of the CEQA Guidelines, and PRC Section 5097.98 mandate the process to be followed in the unlikely event of an unanticipated discovery of human remains in a location other than a dedicated cemetery. The Los Angeles County Coroner must be notified within 24 hours of the discovery of potentially human remains. The Coroner must then determine within two working days of being notified if the remains are subject to his or her authority. If the Coroner recognizes the human remains (including bone fragments and funerary objects) to be Native American, he or she must contact the NAHC by phone within 24 hours. The NAHC then designates a Most Likely Descendant (MLD) with respect to the human remains within 48 hours of notification. The MLD will then have the opportunity to recommend to the Project proponent means for treating or disposing of, with appropriate dignity, the human remains and associated grave goods within 24 hours of notification.
Geology and Soils	**BMP-GEO-1: Erosion Control** The contractor shall implement standard BMPs, such as the use of fiber rolls and silt fencing, to reduce the amount of dust and dirt from leaving the construction area. **BMP-GEO-2: Geotechnical Site Investigation Recommendations** The Geotechnical Site Investigation report for the proposed Project includes recommendations to ensure that the Project Area is suitable for construction, and to ensure that appropriate measures are taken to reduce impacts during earthwork, excavation, utility trenching, backfilling, and other construction activities (Hushmand Associates, Inc., 2018). Backfill soils shall be moisture-conditioned and recompacted to meet ASTM International standards to counteract the potential adverse effects of soil expansiveness. If import soils are used, the import soil shall not exhibit an Expansion Index greater than 20 or contain more than 35 percent fines (i.e., fine-grained soils), and shall be screened by the geotechnical engineer to meet ASTM International standards. **BMP-PAL-1: Paleontological Sensitivity Training** Prior to the start of construction, all field personnel shall be briefed regarding the types of fossils that could be found and the procedures to follow should paleontological resources be encountered. Specifically, the training shall provide a description of the fossil resources that may be encountered, outline steps to follow when a fossil discovery is made, and provide contact information for a qualified paleontologist. The training shall be developed by a qualified paleontologist and provided as hand-outs or a PowerPoint Presentation that may be presented concurrently with other pre-construction training.

	BMP-PAL-2: Unanticipated Paleontological Resource Discoveries In the event that an unanticipated fossil discovery is made during construction, a qualified professional paleontologist shall be retained to examine the find and to determine whether further paleontological resource mitigation is warranted in accordance with SVP (2010) guidelines.
Greenhouse Gas Emissions	**BMP-GHG-1: Off-Road Equipment Construction Requirements** Idling shall be limited for vehicles and off-road equipment. Off-road equipment shall meet Tier 4 emission standards and newer. Efficient on-road haul trucks shall be used, where practicable.
Hazards and Hazardous Materials	**BMP-HAZ-1: Coordination with Regulatory Agencies** The City shall coordinate with Metro, U.S. EPA, and DTSC during construction activities to minimize health risks to the public or the environment associated with ongoing cleanup actions within the Project Area. **BMP-HAZ-2: Compliance with SCAQMD Rules and Regulations** The contractor shall implement measures to ensure that all construction activities are consistent with SCAQMD rules and regulations, including Rule 1166 - Volatile Organic Compound Emissions from Decontamination of Soil and Rule 1466 - Control of Particulate Emissions from Soils with Toxic Air Contaminants.
Hydrology and Water Quality	The following structure source control BMPs, based on the City's LID handbook, would be implemented during construction and/or operation of the proposed Project, as applicable: **BMP-HYDRO-1: Construction Drainage Design** The proposed Project shall incorporate drainage designs that direct stormwater runoff or irrigation runoff away from structures or the top of the slopes. No stormwater will be allowed to discharge over the top of a cut or fill slope. **BMP-HYDRO-2: Off-Site Sediment Transport** All entrances and exits to the construction site shall be stabilized to reduce transport of sediment off-site. Any sediment or other materials tracked off-site shall be removed within a reasonable time. **BMP-HYDRO-3: Storm Drain Message and Signage** Existing and proposed storm drain catch basins within the vicinity of the Project Site shall be marked and maintained. **BMP-HYDRO-4: Outdoor Material Storage Area Design** Proposed outdoor storage areas shall be organized and maintained to prevent stored materials from being permitted to runoff with stormwater. The outdoor storage of toxic and hazardous materials is not permitted. **BMP-HYDRO-5: Outdoor Trash Storage Area Design**

	Proposed outdoor trash storage enclosures shall be organized and maintained to prevent the transportation of trash and debris in stormwater. Bins and dumpsters shall remain covered. **BMP-HYDRO-6: Employee Training** Operations and maintenance employees shall be trained and made aware of the source controls, LID BMPs, educational materials, and maintenance requirements for the proposed Project at first hire and yearly thereafter. **BMP-HYDRO-7: Common Area Landscape Management** A landscape maintenance program shall be established in order to optimize water efficiency, limit pollutant introduction from fertilizers and pesticides, manage landscape waste, and prevent soil erosion. **BMP-HYDRO-8: Common Area Litter Control** A waste management program shall be implemented to inspect the Project Site for litter and pick up any litter as necessary on a regular basis. **BMP-HYDRO-9: Common Area Catch Basin Inspection** Catch basins shall be inspected and maintained, at a minimum, yearly and prior to the rainy season. **BMP-HYDRO-10: Street Sweeping Parking Lots** The angled parking spaces along Anderson Street shall be vacuum swept, at a minimum, yearly and prior to the rainy season. **BMP-HYDRO-11: BMP Maintenance** Proposed structural source controls, non-structural source controls, and LID BMPs shall be maintained as outlined in the Operations and Maintenance Plan that will be developed for the proposed Project. **BMP-HYDRO-12: Structural and LID BMPs** • Runoff from the Project Site and tributary Viaduct areas shall be captured by proposed stormwater drainage systems, routed to a variety of structural and LID BMPs and discharged to the existing stormwater drainage facilities adjacent to the site. In addition, the Project Site shall include a combination of paved surfaces and landscaped areas to provide soil stability and further minimize erosion. • The remaining localized rainfall falling on the portion of the Project Site outside of the Viaduct's footprint shall be treated through a combination of incidental infiltration during sheet flow along pervious land areas, incidental infiltration within localized vegetated basins, and below-grade capture and use systems below some of the proposed lawn areas in areas with a larger impervious area footprint. The incidental infiltration or capture and use of the stormwater will remove pollutants of concern. Larger storm events will be captured and conveyed through proposed local storm drainage systems to new connections to the existing storm drainage system. • Structural BMPs (i.e., proprietary vaults with media-filled cartridges) shall be installed to treat runoff for pollutants of concern identified in the City's LID Manual, including sediments, oil and grease, metals, organic materials, and nutrients.

	Runoff shall also be treated through lined vegetated biofiltration basins and below-grade capture and use systems, where the runoff will be filtered through the vegetation and soil media to remove pollutants of concern before discharging through a perforated underdrain. **BMP-HYDRO-13: Regulatory Requirements for Water Quality** • To comply with the provisions of the NPDES MS4 Permit, the proposed Project shall implement a SWPPP that includes construction site BMPs to control erosion and sedimentation. BMPs include silt fencing, fiber rolls, sandbag barriers, drainage inlet protections, and berms at the top of all grade slopes. The SWPPP shall also include post-construction stormwater management measures to control pollutants in stormwater discharges during operation of the proposed Project. • If groundwater is encountered, the contractor shall develop a dewatering plan, and a Dewatering Permit with the Los Angeles RWQCB will also be required. Should dewatering be required, the proposed Project shall comply with the General Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties. • Proposed construction activities shall comply with all applicable federal, state, and local requirements to reduce the potential for the release of hazardous waste and other contaminants into groundwater. In addition, construction activities will be subject to the provisions of the CWA and Porter-Cologne Act; and other federal, state, and local requirements to ensure that stormwater pollutants resulting from construction will not substantially degrade water quality. • A water diversion plan is not anticipated for the proposed Project because Phase II construction activities shall be performed during the dry season (April 15 through October 15). However, if work in a flowing stream is unavoidable, a water diversion plan shall be required, and the entire stream flow shall be diverted around the work area by a barrier, temporary culvert, new channel, or other means approved by the CDFW. Should water diversion be necessary, a 401/404 permit will also be required. • An emergency evacuation plan shall be prepared for Phase II construction within the LA River. If measurable rain with 25 percent or greater probability is predicted within 72 hours during project-related activities, all activities within the LA River shall cease and protective measures to prevent siltation/erosion shall be implemented/maintained. With the implementation of BMPs, alterations to drainage patterns during construction in the LA River channel will not result in substantial erosion or siltation onsite or offsite. • A Notice of Intent (NOI) for stormwater discharges associated with construction activities may also be required under the NPDES General Permit. • Stormwater BMPs shall follow the latest California Stormwater Quality Association's Stormwater Best Management Practices Handbook. All entrances and exits to a construction site will be stabilized to reduce transport of sediment off-site. Any sediment or other materials tracked off-site will be removed within a reasonable time.

	• Any non-stormwater discharge shall be controlled and properly disposed of through the sanitary sewer system or transported to an approved processing facility to prevent the contamination of site soils and groundwater. • The handling, storage, and disposal of contaminants shall comply with all applicable federal, state, and local requirements. The Project Site shall be remediated to standards acceptable to LACoFD and other regulatory agencies as required, thereby reducing the area affected by contaminants.
Land Use and Planning	**BMP-LAND-1: Coordination with Los Angeles Department of City Planning** The City BOE shall continue to work with the Los Angeles Department of City Planning to ensure that the proposed Project is consistent with future zoning changes. **BMP-LAND-2: Coordination with Viaduct Replacement Project** Any necessary land use entitlements shall be secured prior to the start of construction activities, and shall be coordinated with construction of the Viaduct Replacement Project. **BMP-LAND-3: Construction Area** Construction equipment, materials storage, and construction activities shall be contained within the limits of construction, and construction areas shall be fenced.
Noise	**BMP-NOISE-1: Construction Equipment Requirements** Construction equipment shall be properly maintained and equipped with mufflers.
Transportation/Traffic	**BMP-TRANS-1: Temporary Detour Routes** During proposed construction activities, temporary detours will be provided for any affected pedestrian and bicycle facilities. **BMP-TRANS-2: Construction Staging Plan** A construction staging plan shall be developed to reduce impacts related to noise, dust, traffic, and other health hazards. In addition, construction site BMPs (e.g., fencing, signs, and detours) shall be implemented to minimize hazards and prevent safety issues on the roadways and sidewalks surrounding the construction site. **BMP-TRANS-3: Construction Traffic** Construction-related trips shall be scheduled with increased frequency during off-peak hours to minimize impacts to commuters. **BMP-TRANS-4: Access to Parcels** If access to any existing parcels is removed during proposed construction activities, temporary access shall be provided, and/or new points of access shall be constructed.

	BMP-TRANS-5: Site-Specific Traffic Control and Transit Plan for Large Events Large event permittees shall develop a site-specific traffic control plan to provide information on parking and circulation and highlight transit options for event attendees to minimize congestion and vehicle miles traveled. Traffic control strategies for events will include inbound/outbound flex lanes and sheriff controlled intersections. Traffic control plans will also identify nearby public parking facilities and identify passenger pick-up/drop-off locations. Permittees will be required to consider the cumulative traffic impacts of their event in relation to other events in the Project Area. The traffic control plans will also identify emergency services egress and access.
Utilities and Service Systems	**BMP-USS-1. Wastewater Treatment** Any wastewater produced as a result of proposed construction activities, such as water containing diesel and oil, paint, solvents, cleaners, and other chemicals, as well as construction debris and dirt, shall be collected in settlement tanks and screened. The clean water shall be discharged, and the remaining sludge shall be disposed of in accordance with water and solid waste disposal regulations, including the CWA, the Porter-Cologne Water Quality Control Act, and the RCRA. **BMP-USS-2. Temporary Stormwater Drainage Measures** Temporary stormwater drainage measures to prevent polluted runoff in the construction site shall include, but not be limited to, the installation of earth dikes, drainage swales, and ditches, silt fences, desilting basins, and stormwater drain inlet protection. **BMP-USS-3. Coordination with Service Providers** The location of underground utilities shall be confirmed prior to proposed construction activities by contacting the Underground Service Alert of Southern California (DigAlert). If necessary, the City shall work in close coordination with utility providers to develop a relocation plan to minimize possible impacts and disruption to service utilities. **BPM-USS-4. Reduced Consumption of Water Resources** Design features to reduce the consumption of water resources shall be implemented, such as low-flow water fixtures and water efficient irrigation design and practices. In addition, drought-tolerant landscaping shall be planted to further reduce water consumption.

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Chapter 1
Introduction

This Draft Environmental Impact Report (EIR) evaluates the Sixth Street Park, Arts, River & Connectivity Improvements (PARC) Project (proposed Project) in the City of Los Angeles pursuant to the requirements of the California Environmental Quality Act (CEQA, Public Resources Code sections 21000 et. seq.) and the CEQA Guidelines. The City of Los Angeles (City) Department of Public Works, Bureau of Engineering (LABOE) is the Lead Agency under CEQA.

This chapter presents the following background information for the proposed Project:

- The authority of the City to prepare this Draft EIR,
- The purpose of the environmental review process,
- The scope and content of the Draft EIR,
- Public outreach efforts during the CEQA process,
- Key principles guiding the preparation of this Draft EIR, and
- Related projects considered when analyzing the potential for cumulative environmental impacts.

1.1 Background and Project Overview

The proposed Project would be located in the City between Mateo Street and United States Highway 101 (U.S. 101), underneath and adjacent to the Sixth Street Viaduct (Viaduct). The Viaduct connects the Arts District on the west side of the Los Angeles River (LA River) with Boyle Heights on the east side of the LA River. The City is currently replacing the Viaduct, which is anticipated to be substantially completed in 2022 (Viaduct Replacement Project). The proposed Project would be located on approximately 13 acres owned by the City in Council District 14, at the boundary of the City of Los Angeles' Central City North and Boyle Heights Community Plan areas.

Features of the proposed Project include, but are not limited to, a café, concession area, public restrooms on each side of the LA River, performance and public gathering areas, flexible play areas and lawns, adult fitness equipment, dog play areas, landscaped areas, public art, sports fields and courts, children's play areas and splash pad, picnic and grilling areas, parking spaces, skate park elements, bicycle and pedestrian paths, stormwater infrastructure improvements, and rain gardens. In addition, the proposed Project could include the installation of reinforced concrete planted terraces on the west and east banks of the LA River. The proposed Project would generally include components noted in the *Los Angeles River Revitalization Master Plan* (City of Los Angeles, 2007). Chapter 2, Project Description, provides a more detailed description of the proposed Project.

1.2 Purpose and Intended Use of this EIR

The purpose of this Draft EIR is to inform decision-makers and the general public of the potential environmental impacts that could result from the proposed Project. Under the CEQA Guidelines, an EIR

is the most comprehensive form of environmental documentation. It provides the information needed to assess the environmental consequences of a proposed project, to the extent feasible. EIRs are intended to provide an objective, factually supported, full-disclosure analysis of the environmental consequences associated with a proposed project that has the potential to result in significant, adverse environmental impacts. An EIR is one of the various decision-making tools used by a lead agency to consider the merits and disadvantages of a project that is subject to its discretionary authority.

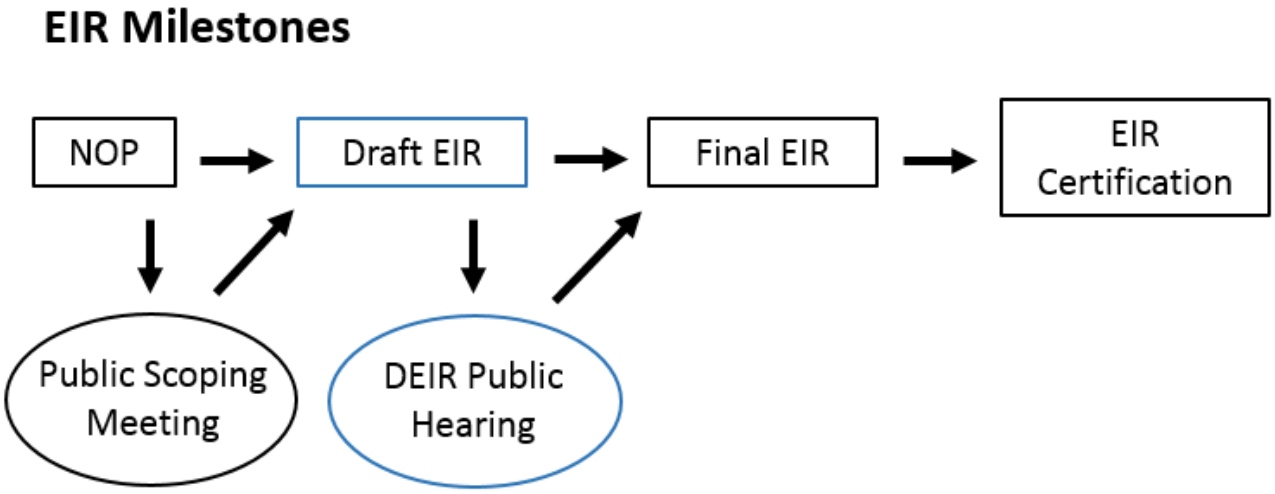
The City of Los Angeles is the CEQA lead agency for the proposed Project. The Draft EIR was prepared by and under the direction of the LABOE, which is responsible for recommending approval and implementing the proposed Project. The LABOE is responsible for obtaining the required environmental and planning permits and approvals as well as designing and constructing the proposed Project. In addition, the Los Angeles City Council must approve and certify the EIR.

CEQA requires the decision-making body to balance, as applicable, the economic, legal, social, technological, or other benefits of the project against the unavoidable environmental risks when determining whether to approve the project. If the benefits of a project outweigh the unavoidable significant environmental impacts of the project, the significant environmental impacts may be considered acceptable. A lead agency is required to prepare a Statement of Overriding Considerations (SOC) when the lead agency approves a project that would result in significant, unavoidable impacts. The SOC contains the specific reasons that support the agency's decision, based on the Final EIR and/or other information in the administrative record. The SOC must be supported by substantial evidence in the record, including findings. In addition, pursuant to Section 21081.6 of CEQA, when approving a project, public agencies must also adopt a mitigation monitoring plan or program for changes that were incorporated into the project or made a condition of project approval to mitigate or avoid significant environmental impacts.

As described in Sections 15121(a) and 15362 of the CEQA Guidelines, an EIR is an informational document that informs public agency decision-makers and the public of the significant environmental effects of a project, identifies possible ways to minimize the significant effects, and describes reasonable alternatives to the project. The purpose of this Draft EIR, therefore, is to focus the discussion on those potential effects of the proposed Project on the environment that the lead agency has determined may be significant. In addition, feasible mitigation measures are recommended, when applicable, to reduce or avoid significant environmental impacts.

As shown in **Figure 1-1**, EIR Process Overview, an EIR is prepared in three key stages. The CEQA process is initiated when the lead agency identifies a proposed project. The lead agency then normally prepares an Initial Study (IS) to identify the preliminary environmental impacts of a proposed project. If the IS determines that a project could have significant, unavoidable environmental impacts, the lead agency must prepare an EIR. A Notice of Preparation (NOP) is prepared to notify public agencies and the general public that the lead agency is initiating the preparation of an EIR. The NOP/IS are circulated for a 30-day review and comment period. During this review period, the lead agency requests comments from agencies, interested parties, stakeholders, and the general public on the scope and content of the environmental information to be included in the Draft EIR.

Figure 1-1: EIR Process Overview



After the close of the 30-day review and comment period, the lead agency continues the preparation of the Draft EIR and associated technical studies (if any). Once the Draft EIR is complete, a Notice of Availability (NOA) is prepared to inform agencies and the general public of the document and the locations where the document can be reviewed. The Draft EIR and NOA are circulated for a 45-day review and comment period, unless the State Clearinghouse approves a shorter period, to provide agencies and the general public an opportunity to review and comment on the adequacy of the analysis and the findings regarding potential environmental impacts of the proposed project. This Draft EIR is being circulated for 60 days.

After the close of the review and comment period, responses to all comments received on the Draft EIR are prepared. The lead agency also prepares a Final EIR, which incorporates the Draft EIR or a revision to the Draft EIR, Draft EIR comments and a list of commenters, and responses to comments. In addition, the lead agency must prepare the following items:

- Findings of fact for each significant effect identified;
- The SOC, if there are significant impacts that cannot be mitigated; and
- A mitigation monitoring and reporting program to ensure that all proposed mitigation measures are implemented.

The Board of Public Works will consider the Final EIR and make a recommendation to the Los Angeles City Council, as the governing body of the City of Los Angeles, regarding certification of the Final EIR and project approval. The City Council may certify and approve the Final EIR or may choose to not approve the project. Recommending bodies (LABOE) and the final decision-makers (City Council) would use the Final EIR to weigh the benefits of the project against its environmental impacts.

During the environmental review and project approval process, people and/or agencies may address the Board of Public Works and City Council regarding the proposed project. Public notification of agenda items for the Board of Public Works would be available online at the following website:

https://www.lacity.org/your-government/departments-commissions/boards-and-commissions/board-public-works-meetings

City Council agenda items are also posted 72 hours prior to a public meeting. The City Council agenda can be obtained by visiting the City Council at the following address:

City Hall
200 North Spring Street
John Ferraro Council Chamber, Room 340
Los Angeles, CA 90012

Agendas can also be accessed via the internet at the link provided above.

Within 5 days of project approval, the LABOE will file a Notice of Determination (NOD) with the County Clerk. The NOD will be posted by the County Clerk within 24 hours of receipt. This begins a 30-day statute of limitations on legal challenges to the CEQA approval by the lead agency. The ability to challenge the approval in court may be limited to those persons who objected to the approval of the proposed project and issues that were presented to the lead agency in writing during the public review and comment periods regarding the EIR.

1.3 Scope and Content of the Draft EIR

In accordance with the requirements of CEQA, the City prepared a NOP/IS, dated April 13, 2017, which identified topics requiring further analysis in the Draft EIR. The IS concluded that the proposed Project would result in less than significant or no impacts related to agriculture and forestry resources and mineral resources. In addition, no impacts related to wildfire are anticipated. Therefore, no further analysis of these resources would be required in the Draft EIR. The focus of this Draft EIR has been limited to the following environmental impact areas:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources and Tribal Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise and Vibration
- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
- Utilities and Service Systems

1.3.1 Notice of Preparation/Initial Study

As described above, the LABOE prepared a NOP/IS for the proposed Project, dated April 13, 2017, in accordance with Section 15082 of the CEQA Guidelines. The NOP was circulated for 30 days, with the public review period occurring from April 13, 2017, to May 22, 2017.

A notice, informing the public of the availability of the NOP/IS, was printed in English in *DTLA News* and in Spanish in *La Opinión*. The notice was also circulated to members of the public, local and state agencies,

organizations, and interested parties to solicit comments on the proposed Project. Concerns that were expressed in response to the NOP/IS include, but are not limited to:

- Handling hazardous waste and contaminated substances;
- Exposing sensitive receptors to pollutants, lights, noise, and vibration;
- Taking existing and potential transportation facilities into account;
- Considering public safety and security around railroad tracks and the LA River;
- Describing mechanical, electrical, sewer capacity, and stormwater drainage requirements;
- Consulting with Native American Tribes; and
- Discussing potential impacts related to right of way, traffic, population growth, displacement, and homeless populations.

These concerns were addressed during the preparation of this Draft EIR. For a full summary of comments received on the proposed Project, see **Table ES-2**. The NOP/IS and received comments are included in **Appendix A** of this Draft EIR.

The NOP/IS was available at the LABOE website, http://eng.lacity.org/sixthstreet_parks_arts, as well as at the following public facilities during the public review period:

- Central Library, 630 West Fifth Street, Los Angeles, CA 90071
- Little Tokyo Library, 203 South Los Angeles Street, Los Angeles, CA 90012
- Robert Louis Stevenson Library, 803 Spence Street, Los Angeles, CA 90023
- Benjamin Franklin Library, 2200 East First Street, Los Angeles, CA 90033
- BH Technology Center, 1600 East Fourth Street, Los Angeles, CA 90033
- Boyle Heights City Hall, 2130 East First Street Suite 241, Los Angeles, CA 90033

Comment letters regarding the NOP/IS were received from the public, as well as the following organizations, agencies, and interested parties:

- Amtrak
- Arts District Los Angeles Business Improvement District
- California Department of Toxic Substances Control (DTSC)
- California Department of Transportation (Caltrans)
- Central City Association of Los Angeles
- City of Los Angeles Department of Recreation and Parks (RAP)
- City of Los Angeles Department of Water and Power
- City of Los Angeles Sanitation
- Friends of the LA River

- Latham & Watkins LLP
- Los Angeles County Metropolitan Transportation Authority (Metro)
- Native American Heritage Commission
- Gabrieleño Band of Mission Indians-Kizh Nation
- South Coast Air Quality Management District (SCAQMD)
- Union Pacific Railroad (UPRR)

1.3.2 Public Outreach Efforts

Planning efforts to engage local communities and stakeholders in the proposed Project began in January 2017, and included the following:

- **Site tours**: Guided community site tours of the Project Area were conducted on January 7, 2017, with community leaders.
- **Small focus group meetings**: Small focus group meetings were held with community leaders and youth on January 10, 2017; January 12, 2017; and March 8, 2017, to discuss potential park features and uses.
- **Large community meetings**: Community meetings were held on February 7, 2017, at the PUENTE Learning Center, and on February 8, 2017, at the Southern California Institute of Architecture (Sci-Arc). The community meetings had a combined attendance of more than 300 people to discuss potential park features and uses, and the evolving park design process. A survey was distributed at the community meetings and made available on the LABOE website to allow the public to vote on their preferred park features. Over 1,000 survey responses were received. On March 28 and 30, 2017, additional community meetings were held at Sci-Arc and the PUENTE Learning Center, respectively, to present three conceptual approaches for the park, which incorporated public feedback from the surveys. Additional community meetings were held (in English and Spanish) on September 19, 2017, at the Aliso Pico Recreation Center, and on September 20, 2017, at Sci-Arc. At the meetings, attendees voted on the preferred conceptual design for the park.
- **Public Scoping Meetings**: A public scoping meeting was held on May 3, 2017, at the PUENTE Learning Center in Boyle Heights. The purpose of the meeting was to seek input from agencies, organizations, and the public on potentially affected resources, environmental issues to be considered, and the lead agency's planned approach to the analysis in the Draft EIR. A bilingual (English and Spanish) public scoping meeting was held on May 11, 2017, at the Aliso Pico Gymnasium in Los Angeles, in response to public feedback. The bilingual meeting discussed the same topics and provided the same resources as the May 3, 2017, meeting. During the public scoping meetings, the public expressed concerns regarding gentrification, rent prices, housing development, population growth, and the displacement of existing populations and the homeless. **Appendix A** includes comments that were received during the public scoping meetings. Per the requirements of CEQA, a public meeting will be held following completion of the Draft EIR.
- **Small group meetings**: Additional small group meetings, focus groups, and presentations to community stakeholders groups have also occurred.

- **Community survey**: At the community meetings, surveys were conducted to better understand the potential park user needs and obtain public input on desired park uses and amenities. Surveys were also available to public and other interested parties at http://www.sixthstreetviaduct.org/. Over 1,000 people responded and a summary of the results was posted at the website above.

The project design team will continue to engage the community throughout the design process. Updates on upcoming meetings can be found at http://www.sixthstreetviaduct.org.

1.4 Responsible and Trustee Agencies and Project Approvals

Under CEQA, a responsible agency is a public agency, other than the lead agency, that has responsibility to carry out or approve a project (Public Resources Code [PRC] Section 21069). A trustee agency is a state agency that has jurisdiction by law over natural resources that are held in trust for the people of the State of California (PRC Section 21070).

The following agencies and organizations may be required to provide project approvals and/or permits (see also **Table 2-2**, Responsible Agencies in Chapter 2, Project Description, of this Draft EIR):

- Amtrak
- Burlington Northern Santa Fe
- California Department of Fish & Wildlife
- California Department of Toxic Substances Control
- California State Historic Preservation Office
- City of Los Angeles Board of Public Works
- City of Los Angeles Bureau of Street Lighting
- City of Los Angeles City Council
- City of Los Angeles Department of Building and Safety
- City of Los Angeles Department of City Planning
- City of Los Angeles Department of Cultural Affairs
- City of Los Angeles Department of Recreation and Parks
- City of Los Angeles Department of Transportation
- City of Los Angeles Department of Water and Power
- City of Los Angeles Fire Department
- City of Los Angeles Sanitation
- Federal Railroad Administration
- Federal Transit Administration
- Los Angeles County Fire Department

- Los Angeles County Metropolitan Transportation Authority
- Los Angeles Regional Water Quality Control Board
- South Coast Air Quality Management District
- Southern California Regional Rail Authority
- United States Army Corps of Engineers
- Union Pacific Railroad

1.5 Organization of the Draft EIR

This Draft EIR conforms to the content requirements stated in Sections 15120 through 15132 of the CEQA Guidelines. A list of the document's chapters, including a brief description of their content, is provided here to assist the reader in locating information.

Executive Summary: The Executive Summary provides a brief description of the proposed Project, including a summary of the impact analysis and recommended mitigation measures.

Chapter 1. Introduction: This chapter provides general background information regarding project development. In addition, this chapter describes the purpose of CEQA and this Draft EIR, as well as the Draft EIR scoping process, the availability of documents, and the Draft EIR review process.

Chapter 2. Project Description: This chapter presents a statement of the proposed Project's objectives, a description of the location and setting of the proposed Project, a detailed description of the proposed Project's physical characteristics, and related information on phasing and implementation.

Chapter 3. Environmental Impact Analysis: This chapter analyzes the potential impacts that could occur as a result of construction or implementation of the proposed Project. The impact discussion is organized by issues that have the potential to result in significant impacts.

Chapter 4. Comparison of Alternatives: This chapter includes a discussion of the proposed alternatives and compares the impacts associated with each alternative.

Chapter 5. Other Environmental Considerations: This chapter evaluates impacts related to growth-inducing effects and cumulative growth. Impacts found not to be significant and unavoidable adverse impacts are also summarized.

Chapter 6. Preparers, Contributors, and Oversight: This chapter lists the persons who prepared this Draft EIR, as well as the persons who were consulted to obtain the information that was used in the preparation of this Draft EIR.

Chapter 7. References: This chapter lists the sources of information that were referenced for the analyses contained within this Draft EIR.

1.6 Related Projects

The proposed Project would be located underneath and adjacent to the Viaduct. The Viaduct connects the Arts District on the west side of the LA River with Boyle Heights on the east side of the LA River. The

City is currently replacing the Viaduct, which is anticipated to be substantially completed in 2022 (Viaduct Replacement Project).

Other federally funded projects in proximity to the proposed Project have components which include intersection improvements for bicycles and pedestrians, landscaping features, and bicycle lanes in the proposed Project Area. Three separate but related projects that are associated with the proposed Project include Active Transportation Program (ATP) projects that are federally funded but administered through the Los Angeles County Metropolitan Transportation Authority (Metro). ATP-1: Sixth Street Viaduct Replacement Project Bicycle and Pedestrian Facilities (currently in design), ATP-2: Boyle Heights Pedestrian Linkages (currently in design), and ATP-3: Downtown LA Arts District Pedestrian and Cyclist Safety Project (currently in design) include improvements to the safety and accessibility of bicycle and/or pedestrian facilities in the vicinity of the proposed Project. In addition, City of Los Angeles Sanitation is proposing a parking lot with approximately 30 to 40 spaces at the intersection of Jesse Street and Mission Road.

Other development projects within a half-mile buffer of the Project Area are included in **Table 1-1**(see **Figure 1-2**, Development Projects)**.**

1.7 Key Principles

1.7.1 Forecasting

In this Draft EIR, LABOE has made its best effort to predict and evaluate the reasonably foreseeable direct, indirect, and cumulative environmental impacts of the proposed Project and alternatives. CEQA does not require LABOE to engage in speculation about impacts that are not reasonably foreseeable (CEQA Guidelines Sections 15144, 15145). In these instances, CEQA does not require a worst-case analysis.

1.7.2 Reliance on Environmental Thresholds and Substantial Evidence

The identification of environmental impacts as significant or less than significant is an important function of an EIR. Impacts determined to be less than significant only need to be acknowledged as such; however, an EIR must identify mitigation measures for any impact identified as significant. In this Draft EIR, the LABOE based its conclusions about the significance of environmental impacts on identifiable thresholds, specifically those from the Appendix G of the CEQA Guidelines and has supported these conclusions with substantial scientific evidence. In addition, the document includes screening and significance criteria provided in the *L.A. CEQA Thresholds Guide* to assist in determining the significance of environmental impacts on the thresholds identified in Appendix G of the CEQA Guidelines (City of Los Angeles, 2006). The thresholds of significance analyzed in this Draft EIR reflect only those that were not previously eliminated in the IS (see **Appendix A** of this Draft EIR). Therefore, only the remaining thresholds from CEQA Appendix G and the *L.A. CEQA Thresholds Guide* that were not addressed in the IS are evaluated.

Table 1-1: Current and Future Development Projects

Location	Project Name	Address	Proposed/Developed Use
Recently Developed			
RD-1	Garey Building	905 East Second Street	5 story building with 320 residential units, commercial, and retail space
RD-2	Hauser & Wirth	901 East Third Street	Art gallery, bookstore, and restaurant
RD-3	Lee & Associates	330 South Alameda Street	Creative office space
RD-4	One Santa Fe	300 South Santa Fe Avenue	6 story building with residential units, commercial, retail, and restaurant space
RD-5	Fourth & Traction	963 East Fourth Street	Creative office and retail space with a parking structure
RD-6	A+D Architecture and Design Museum	900 East Fourth Street	Architecture and Design Museum
RD-7	Edward Hotel Apartments	713 East Fifth Street	47 Single Room Occupancy apartment units
RD-8	Arts District Park	501 South Hewitt Street	Park
RD-9	Barker Block Lofts	530 South Hewitt Street	Residential units
RD-10	La Kretz Innovation Campus	525 South Hewitt Street	Offices, conference rooms, labs, workshop, training center, and event space
RD-11	Institute of Contemporary Art	1717 East Seventh Street	Exhibition space, retail, and a café
RD-12	Amp Lofts	695 South Santa Fe Avenue	180 live/work units and retail space
RD-13	Ford Factory Building	777 South Santa Fe Avenue	Adaptive reuse of building into a creative office campus

RD-14	Art House Lofts	1200 South Santa Fe Avenue	Adaptive reuse of building into live/work units with retail space
RD-15	Metro Location 64 Maintenance of Way (MOW) Building	590 South Santa Fe Avenue	Facility to repair and maintain track vehicles to maintain the Red and Purple Line tracks and other systems
RD-16	Soho Warehouse	1000 South Santa Fe Avenue	Market, health club, and restaurant
RD-17	Rolling Greens	1005 South Mateo Street	Industrial space for nursery and retail store
Under Construction			
UC-1	Five Arts District Buildings	950 East Third Street	Multiple 5 and 6 story buildings with 471 residential units, commercial space, and amenities
UC-2	Metro Arts District Rail Yard	320 South Santa Fe Avenue	Upgrades to rail yard
UC-3	Restaurant	500 South Mateo Street	High-turnover restaurant
UC-4	At Mateo	555 Mateo Street	Retail, office, and parking space
UC-5	Sixth Street Viaduct	East Sixth Street	Replacement of 3,500-foot-long viaduct
UC-6	Hillcrest Mixed-Use	1745 East Seventh Street	57 apartment units and 6,000 square feet of retail space
UC-7	Mixed-Use Development (Carmel Partners)	520 South Mateo Street	600 live/work units, office space, retail space, and cultural space
UC-8	Office Mixed-Use Complex	640 South Santa Fe Avenue	Office, retail, and restaurant space
Proposed/Planned			
P-1	2nd and Vignes	929 East Second Street	Retail, event space, bar/lounge, offices, private health club, and private movie theater

P-2	Little Tokyo Galleria Redevelopment	333 South Alameda Street	Live/work units, commercial space, and parking
P-3	4th & Hewitt	401 South Hewitt Street	Residential-retail complex with office and retail space
P-4	Alameda and 4th Lofts	360 South Alameda Street	328 apartment units and office, retail, and restaurant space
P-5	Mixed-Use Development (4th & Hewitt)	940 East Fourth Street	93 live/work units and commercial space
P-6	Boutique Hotel/4th & Alameda	400 South Alameda Street	Hotel with retail space
P-7	Office Building	405 South Hewitt Street	11 story building with commercial space and new office space
P-8	Hollenbeck Park Lake Rehabilitation	415 South St Louis Street	Water quality improvements, polluted runoff diversion and treatment, flow diversion and recycled water replenishment, visual park improvements, and development of erosion control methods
P-9	Arts District Center	1101 East Fifth Street	129 live/work units, 113 hotel rooms, and retail space
P-10	Arts District Center (Mixed-Use)	1129 East Fifth Street	Retail, restaurant, hotel room units, apartment units, art school, and art gallery
P-11	ATP Cycle 2/Boyle Heights Pedestrian Linkages	Clarence Street and Anderson Street	Pedestrian infrastructure improvements, including new sidewalk, sidewalk repairs, and installation of pedestrian lighting, continental crosswalks, and curb ramps to improve connectivity
P-12	Mixed-Use/5th & Seaton	1100 East Fifth Street	Live/work units, and restaurant and retail space
P-13	Palmetto Colyton	527 Colyton Street	13 story building with 310 live-work units, retail use, and art production space
P-14	Office	540 South Santa Fe Avenue	Office space
P-15	Charter School	443 South Soto Street	Elementary school with student enrollment of 625

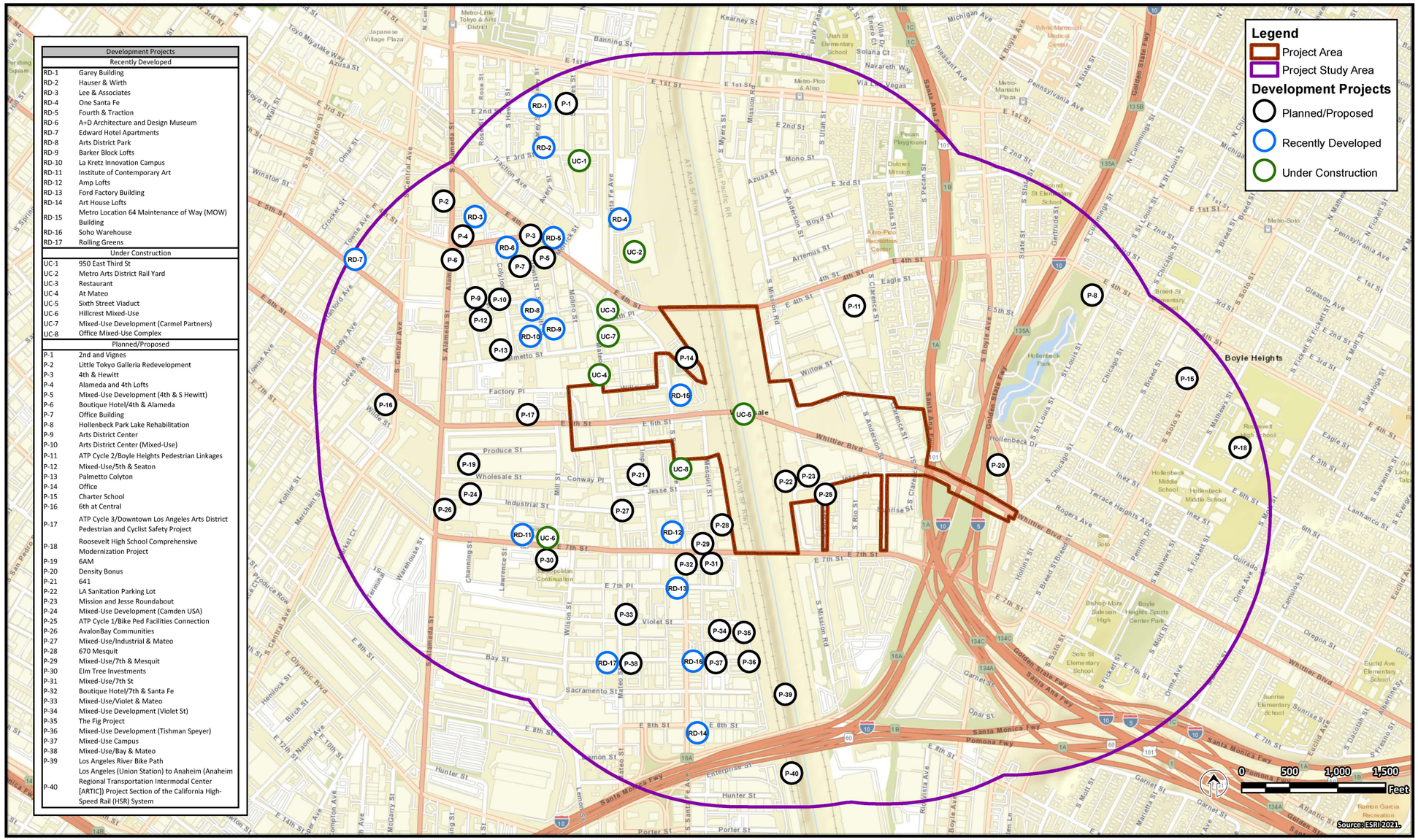
P-16	6th at Central	930 East Sixth Street	236 apartment units and retail space
P-17	ATP Cycle 3/Downton Los Angeles Arts District Pedestrian and Cyclist Safety Project	Area bounded by Second Street, Seventh Street, Alameda Street, and the LA River	Provide pedestrian and cyclist safety, access, and connectivity improvements, including cycle tracks/bike lanes/bike routes; new/widened sidewalks with curb extensions; high visibility and raised crosswalks; traffic controlled intersections; shade trees; pedestrian lighting; wayfinding signage; and alley conversion into a Shared Street connecting to the new Sixth Street Viaduct Arts Plaza
P-18	Roosevelt High School Comprehensive Modernization Project	544 S Mathews Street	Upgrading, renovating, modernizing, and reconfiguring the Roosevelt High School campus to include new classrooms, gymnasium, lunch shelter, and auditorium
P-19	6AM	1211 Wholesale Street	7 story building with residential units, hotel rooms, offices, retail, cultural, and school use
P-20	Density Bonus	733 Boyle Avenue	Up to 10 density bonus units
P-21	641	641 South Imperial Street	140 live/work units, retail, art production, and creative office space.
P-22	LA Sanitation Parking Lot	Intersection of Jesse Street and Mission Road	14,500 square-foot parking lot with approximately 30 to 40 parking spaces
P-23	Mission and Jesse Roundabout	Intersection of Jesse Street and Mission Road	Reconfiguration of the intersection of Mission Road, Jesse Street, and Myers Street
P-24	Mixed-Use Development (Camden USA)	1525 East Industrial Street	7 story building with 344 live/work units and commercial space
P-25	Active Transportation Program (ATP) Cycle 1/Bicycle and Pedestrian Facilities Connection	Along Mission Street and Myers Street between the Sixth Street Viaduct and Seventh Street	Active transportation elements consisting of sidewalk and bike lane improvements, concrete American with Disabilities Act (ADA) ramps at intersections, continental striping, and lighting.

P-26	AvalonBay Communities	668 South Alameda Street	475 live/work units and retail space
P-27	Mixed-Use/Industrial & Mateo	676 South Mateo Street	Live/work units and restaurant space
P-28	670 Mesquit	670 Mesquit Street	Office space, residential units, 2 hotels, and retail
P-29	Mixed-Use/7th & Mesquit	2051 East Seventh Street	320 apartment units and restaurant and retail space
P-30	Elm Tree Investments	1800 East Seventh Street	7 story complex with 125 live/work units, retail space, artist production space, green space, and parking
P-31	Mixed-Use/7th Street	2030 East Seventh Street	Office and retail space
P-32	Boutique Hotel/7th & Santa Fe	710 South Santa Fe Avenue	Remodel a vacant fire house into a 10 room hotel with restaurant and retail space
P-33	Mixed-Use/Violet & Mateo	826 South Mateo Street	90 live/work units and retail and restaurant space
P-34	Mixed-Use Development (Violet St)	2143 East Violet Street	13 story building with 509 live/work units and commercial space (Omni Group)
P-35	The Fig Project	2130 East Violet Avenue	Office, retail and restaurant space
P-36	Mixed-Use Development (Tishman Speyer)	2159 East Bay Street	8 story building with offices, retail, and parking spaces
P-37	Mixed-Use Campus	2110 Bay Street	99 apartment units including 11 affordable housing units, and office and retail space
P-38	Mixed-Use/Bay & Mateo	1024 Mateo Street	Apartment units, office, restaurant, retail, and light industrial space
P-39	Los Angeles River Bike Path Gap Closure Project	Along LA River from Elysian valley through Downtown Los Angeles to the City of Vernon	Planned extension of existing segments of the 32-mile greenway proposed in the Los Angeles River Revitalization Master Plan

P-40	Los Angeles (Union Station) to Anaheim (Anaheim Regional Transportation Intermodal Center [ARTIC]) Project Section of the California High-Speed Rail (HSR) System	Located at the ARTIC near Angels Stadium and the Honda Center.	HSR system from the city of Los Angeles to Anaheim

Source: (Kimley-Horn and Associates, Inc., 2019; City of Los Angeles, 2017; City of Los Angeles, 2019)

Figure 1-2: Development Projects



Development Projects	
Recently Developed	
RD-1	Garey Building
RD-2	Hauser & Wirth
RD-3	Lee & Associates
RD-4	One Santa Fe
RD-5	Fourth & Traction
RD-6	A+D Architecture and Design Museum
RD-7	Edward Hotel Apartments
RD-8	Arts District Park
RD-9	Barker Block Lofts
RD-10	La Kretz Innovation Campus
RD-11	Institute of Contemporary Art
RD-12	Amp Lofts
RD-13	Ford Factory Building
RD-14	Art House Lofts
RD-15	Metro Location 64 Maintenance of Way (MOW) Building
RD-16	Soho Warehouse
RD-17	Rolling Greens
Under Construction	
UC-1	950 East Third St
UC-2	Metro Arts District Rail Yard
UC-3	Restaurant
UC-4	At Mateo
UC-5	Sixth Street Viaduct
UC-6	Hillcrest Mixed-Use
UC-7	Mixed-Use Development (Carmel Partners)
UC-8	Office Mixed-Use Complex
Planned/Proposed	
P-1	2nd and Vignes
P-2	Little Tokyo Galleria Redevelopment
P-3	4th & Hewitt
P-4	Alameda and 4th Lofts
P-5	Mixed-Use Development (4th & S Hewitt)
P-6	Boutique Hotel/4th & Alameda
P-7	Office Building
P-8	Hollenbeck Park Lake Rehabilitation
P-9	Arts District Center
P-10	Arts District Center (Mixed-Use)
P-11	ATP Cycle 2/Boyle Heights Pedestrian Linkages
P-12	Mixed-Use/5th & Seaton
P-13	Palmetto Colyton
P-14	Office
P-15	Charter School
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P-17	ATP Cycle 3/Downtown Los Angeles Arts District Pedestrian and Cyclist Safety Project
P-18	Roosevelt High School Comprehensive Modernization Project
P-19	6AM
P-20	Density Bonus
P-21	641
P-22	LA Sanitation Parking Lot
P-23	Mission and Jesse Roundabout
P-24	Mixed-Use Development (Camden USA)
P-25	ATP Cycle 1/Bike Ped Facilities Connection
P-26	AvalonBay Communities
P-27	Mixed-Use/Industrial & Mateo
P-28	670 Mesquit
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P-30	Elm Tree Investments
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P-33	Mixed-Use/Violet & Mateo
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P-35	The Fig Project
P-36	Mixed-Use Development (Tishman Speyer)
P-37	Mixed-Use Campus
P-38	Mixed-Use/Bay & Mateo
P-39	Los Angeles River Bike Path
P-40	Los Angeles (Union Station) to Anaheim (Anaheim Regional Transportation Intermodal Center [ARTIC]) Project Section of the California High-Speed Rail (HSR) System

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FIGURE 1-2: DEVELOPMENT PROJECTS
Sixth Street PARC Project

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1.7.3 Disagreement among Experts

During the public review of this Draft EIR, evidence that might raise disagreements may be presented. Such disagreements will be noted and will be considered by the decision-makers during the public hearing process. In accordance with the provisions of the CEQA Guidelines, known controversies concerning the environmental impacts of the proposed Project have been identified in the Draft EIR. The Draft EIR has included sufficient information to allow the public and decision-makers to make an informed judgment about the environmental consequences of the proposed Project.

1.8 Review of the Draft EIR

This Draft EIR will be circulated for review and comments from the public and other interested parties, agencies, and organizations for 60 days. Due to the global pandemic, a virtual public meeting in English and Spanish will be held on **July 14, 2021 at 6:30 PM** on Zoom. In-person accommodation, at a location in or near Boyle Heights, will also be made available for anyone requiring access to a screen or internet connection. Details about the in-person location will be available closer to the meeting date. A notice regarding the public review period and how to access the public meeting will be posted on the BOE project website: https://eng.lacity.org/about-us/divisions/environmental-management/projects/sixth-street-park-arts-river-connectivity-improvements-parc, and published in the *DTLA News* in English and *La Opinion* in Spanish. Project stakeholders will also receive mail and email notification.

During the public comment period, all comments or questions about the Draft EIR should be addressed to:

Dr. Jan Green Rebstock, Environmental Supervisor II
Department of Public Works
Bureau of Engineering, Environmental Management Group
1149 South Broadway, Suite 600, Mail Stop 939
Los Angeles, CA 90015
Email: Jan.Green.Rebstock@lacity.org

Following public review of the Draft EIR, a Final EIR will be prepared in response to comments received during the public review period. The LABOE does not have an obligation to respond to comment letters received after the close of the public comment period (Public Resources Code Section 21091(d)(1) and Public Resources Code Section 21092.5(c)). The Board of Public Works will consider the proposed Project and make recommendations to the Los Angeles City Council, the governing body of the City of Los Angeles, regarding certification of the Final EIR and project approval. The City Council may certify and approve the Final EIR or may choose not to approve the proposed Project.

The Final EIR will be available for public review at least 10 days prior to its certification (State CEQA Guidelines Section 15088(b)). All responses to comments submitted on the EIR by public agencies will be provided to those agencies at least 10 days prior to final action on the project. The City Council will make findings regarding the extent and nature of the impacts, as depicted in the Final EIR.

During the environmental review and project approval process, people and/or agencies may address the Board of Public Works and City Council regarding the proposed Project. Public notification of agenda items for the Board of Public Works would be available online at the following website:

https://www.lacity.org/your-government/departments-commissions/boards-and-commissions/board-public-works-meetings

City Council agenda items are also posted 72 hours prior to a public meeting. The City Council agenda can be obtained by visiting the City Council at the following address:

City Hall
200 North Spring Street
John Ferraro Council Chamber, Room 340
Los Angeles, CA 90012

Agendas can also be accessed via the internet at the link provided above.

Within 5 days of project approval, the LABOE will file a NOD with the State Clearinghouse and County Clerk. The NOD will be posted by the County Clerk within 24 hours of receipt. This begins the 30-day statute of limitations on legal challenges to CEQA approval by the lead agency. The ability to challenge the approval in court may be limited to those persons who objected to approval of the proposed Project and issues that were presented to the lead agency in writing during the public review and comment periods for the EIR.

Chapter 2
Project Description

2.1 Introduction

The Sixth Street Viaduct Division of the City of Los Angeles (City) Department of Public Works, Bureau of Engineering (BOE), is proposing the construction of the Sixth Street Park, Arts, River & Connectivity Improvements (PARC) Project (proposed Project). The Sixth Street PARC Project includes the creation of public recreational space on approximately 13 acres, in areas underneath and adjacent to the upcoming Sixth Street Viaduct (Viaduct) in the City of Los Angeles (Project Site). The City is the Lead Agency for the proposed Project under the California Environmental Quality Act (CEQA).

2.2 Project Location and Environmental Setting

The proposed Project would be located under and adjacent to the Sixth Street Viaduct between Mateo Street to the west and the United States Highway 101 (U.S. 101) to the east, in the City of Los Angeles (Project Area) (see **Figure 2-1**, Regional Location and **Figure 2-2**, Project Area). The Project Area, which includes the potential area of direct and indirect impacts resulting from the proposed Project, spans from the Downtown Los Angeles Arts District on the west side of the Los Angeles River ("River" or "LA River") to the neighborhood of Boyle Heights on the east side of the LA River.

The Sixth Street Viaduct was a vital connection between Downtown Los Angeles and Boyle Heights. The majority of the Project Area is currently a construction site for the Sixth Street Viaduct Replacement Project ("Viaduct Replacement Project"), which began in 2016. As such, the Project Area primarily consists of fencing around an area of exposed soil with staged construction equipment and materials.

The Project Area is located in Council District 14 at the boundary of the City of Los Angeles' Central City North and Boyle Heights Community Plan areas. Land uses along the north and south sides of the Viaduct are predominately industrial and commercial. The nearest residence borders the northeastern edge of the Project Area at the intersection of South Clarence Street and Inez Street, and the eastern edge of the Project Area at the intersection of Boyle Avenue and Whittier Boulevard.

Railroad corridors are adjacent to the east and west banks of the LA River within the Project Area. The Los Angeles County Metropolitan Transportation Authority (Metro), Southern California Regional Rail Authority (SCRRA), Burlington Northern Santa Fe (BNSF), Amtrak, and Union Pacific Railroad (UPRR) own and/or operate railroad corridors within the Project Area. The Los Angeles Department of Water and Power's (LADWP) Transmission Right of Way (TLRW) is also located along the east and west banks of the River.

The segment of the LA River within the Project Area is a trapezoidal concrete-lined channel, which serves as a flood control channel that receives stormwater runoff from the surrounding watershed. The River discharges to an estuary south of the project area in Queensway Bay, in the Long Beach Harbor. An existing tunnel (LA River Access Tunnel) is located under the railroad tracks west of the River. LADWP

Figure 2-1: Regional Location

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FIGURE 2-1. REGIONAL LOCATION
Sixth Street PARC Project

Figure 2-2: Project Area

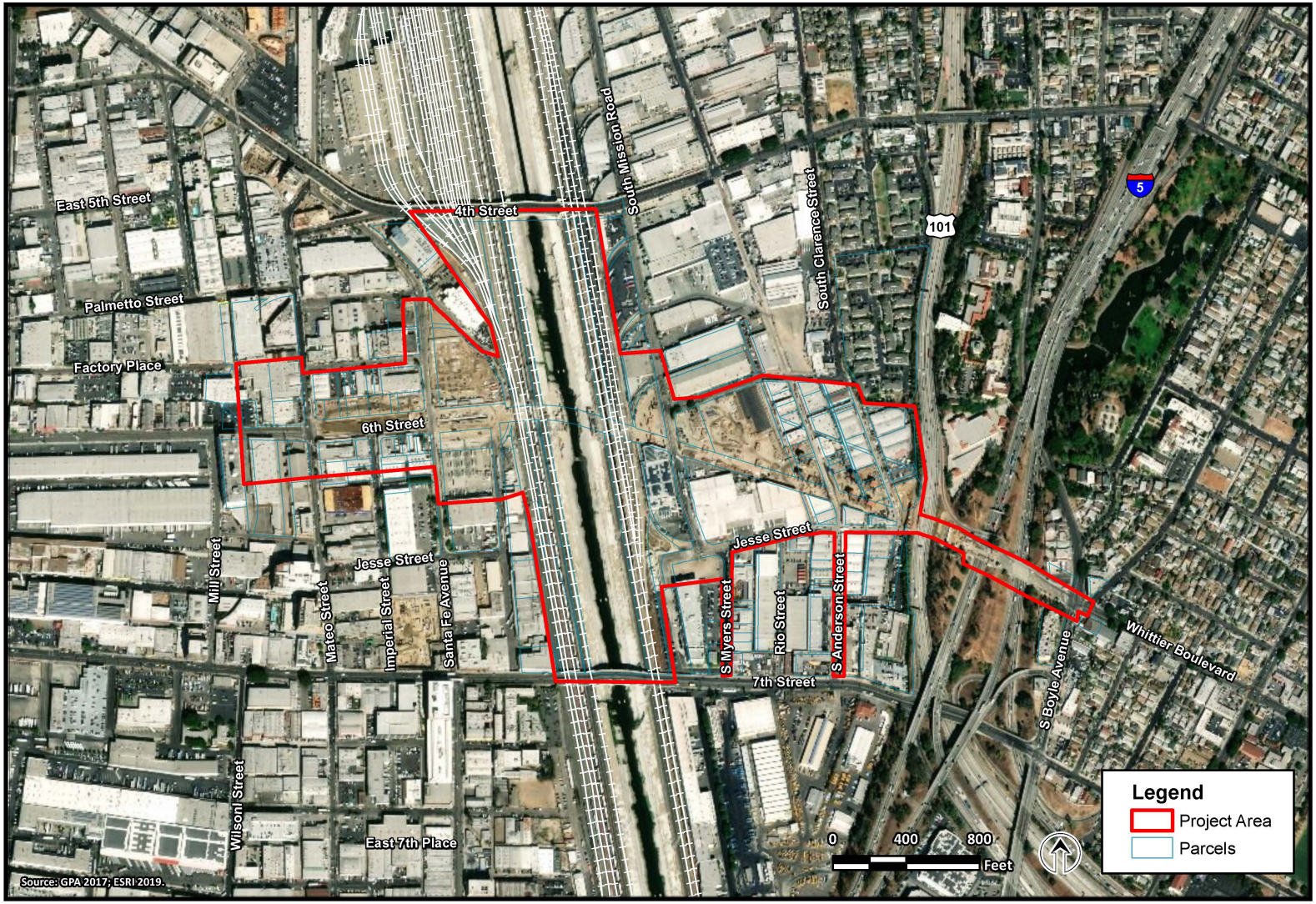

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FIGURE 2-2. PROJECT AREA
Sixth Street PARC Project

TLRW used this tunnel to access the River from Santa Fe Avenue. The City of Los Angeles owns and operates this tunnel.

2.3 Land Use Designation and Zoning

The Project Area is within the Central City North and Boyle Heights Community Plan areas, which were last updated in 2000 and 1998, respectively (City of Los Angeles, 2000; City of Los Angeles, 1998). Both Community Plans are currently undergoing an update. The Project Area includes the following land use designations under the City of Los Angeles Planning and Zoning Code: Limited Industrial (zoned M1), Light Industrial (zoned M2), Heavy Industrial (zoned M3), Open Space (zoned OS) within the River channel, and Public Facilities (zoned PF).

2.4 Project Objectives

The proposed Project has the following objectives:

- Serve the open space and recreational needs of surrounding communities;
- Connect and improve neighborhoods;
- Incorporate sustainable design consistent with the City's plans and goals;
- Encourage active modes of transportation and public transit;
- Promote beneficial stormwater treatment and/or capture; and
- Provide safe pedestrian and bicycle access to the LA River.

The proposed Project would be designed to conform to the *Los Angeles River Revitalization Master Plan* (City of Los Angeles, 2007), the City of Los Angeles' *Mobility Plan 2035* (City of Los Angeles, 2016), the *One Water LA 2040 Plan* (City of Los Angeles, 2018), and other local and adopted plans as applicable. Consistent with the project objectives, the proposed Project would endeavor to adhere to the following guidelines and design goals:

- Active and passive recreation that serves the needs of the community, particularly Boyle Heights and the Arts District.
- Connections to improvements within the neighborhoods in proximity to the Sixth Street Viaduct open spaces.
- Advanced design in keeping with the City's sustainability, low impact development (LID), green building, and Envision goals, which would include sensitivity to supporting all modes of traversing under the Viaduct.
- Promotion of multi-modal active transportation components, including linking to existing and future bicycle and pedestrian facilities.
- Environmentally friendly design that promotes beneficial stormwater treatment and/or capture throughout the site.

The most extensive project scope and associated impacts are being presented in this EIR; however, the City would only construct project elements that are within available funding at the time of construction bidding.

2.5 Proposed Project Elements

The proposed Project would create public recreational space on approximately 13 acres in areas underneath and adjacent to the Viaduct. Approximately 5.8 acres of the PARC would be directly under the Viaduct. The proposed Project is divided into the following sections: (1) West Park, which is located in the Central City North Community Plan; (2) Arts Plaza and River Gateway, which is located in the Central City North Community Plan and along the west and east banks of the LA River channel; and (3) East Park, which is located in the Boyle Heights Community Plan (see **Figure 2-3**, Project Site).

The City's Department of Recreation and Parks or some other entity will be responsible for programming activities for the proposed Project. **Table 2-1** provides the proposed programming activities and assumed traffic generators for the proposed Project. **Figure 2-4**, Proposed Site Plan, shows the overall site plan. Detailed site plans and renderings for the proposed park sections are included at the end of Chapter 2 (see **Figure 2-7** through **Figure 2-20**). Construction would be divided into two phases. Phase I would consist of constructing the General Park Elements as well as East Park, West Park, Arts Plaza and River Gateway. Phase II could consist of installing reinforced concrete planted terraces along the banks of the LA River. The proposed Project elements that are denoted with an asterisk (*) have been selected as bid alternates and are subject to available funding.

2.5.1 Phase I

Construction within Phase I may be phased from East to West as space becomes available below the Viaduct. The following elements would be constructed as part of Phase I of the proposed Project:

General Park Elements

- Typical park site furnishings and amenities, which would include benches, tables, bike racks, bicycle rentals, kiosks, drinking fountains, safety bollards, lighting and signage, fencing, gates, trash receptacles/enclosures, and equipment and maintenance storage unit(s);
- Pedestrian paths, bicycle paths and connections, and internal park roadways and service roads;
- Park lighting;
- Minor relocations of existing street lighting along Santa Fe Avenue, Mission Road, and Anderson Street within the Project Area;
- Pedestrian street lighting on Santa Fe Avenue, Anderson Street, and South Clarence Street;
- Public art sculptures (up to 30 feet high, 24 feet wide, by 11 feet long) and associated interpretive exhibits;
- Utility connections (electrical and plumbing);

- Utility relocations and undergrounding in some areas may be required; Other miscellaneous utility improvements such as installation of WiFi, security cameras, and hookups for food trucks, temporary performance equipment (sound and lighting), and water;
- Site soil would be remediated to standards acceptable by the Los Angeles County Fire Department and other regulatory agencies as required prior to proposed Project construction. Some soil remediation activities may also be required during construction;
- Irrigation systems and open space;
- Demolition of existing urban infrastructure, such as pavement and roadways;
- Landscaping would be consistent with the City's River Improvement Overlay (RIO) Ordinance (Ordinance Number 183145), which requires that 75 percent of any project's newly landscaped area be planted with any combination of native trees, plants and shrubs, species defined as WatershedWise (i.e., climate adapted and non-invasive plants), or species listed in the Los Angeles River Master Plan Landscaping Guidelines and Plant Palette;
- Connectivity improvements, which may include, but are not limited to, a pedestrian activated crosswalk signal on Santa Fe Avenue, a speed table at the continental crosswalk on Santa Fe Avenue, and speed tables with solar-powered rectangular rapid flashing beacons at South Clarence Street, Mission Road, and South Anderson Street;
- Retaining wall(s), which would be between approximately 2- and 17-feet high; and
- Stormwater infrastructure improvements, which would include proposed stormwater drainage systems that would capture runoff from the proposed Project Site and tributary Viaduct areas, route stormwater to structural and LID best management practices (BMP) (e.g., proprietary vaults with media-filled cartridges, catch basin filter inserts, incidental infiltration during sheet flow and within localized vegetated basins, and below-grade capture and use systems), and discharge to existing stormwater drainage facilities that drain to the LA River.

Table 2-1: Proposed Programming Activities and Assumed Traffic Generators

Event Type	Location	Approximate Event Capacity	Estimated Annual Frequency	Approximate Event Duration (hours)	Time of day/week
Concerts, performances	Arts Plaza - stage area	1,000	24 events: (2) 1000-persons (10) 200-persons (12) 50-persons	3	Evenings; Weekends
Concerts, Performances, Events, Festivals	East Park - flex play and performance lawns (2)	2,000 (1,000 each area)	26 events: (4) 500-persons (20) 100-persons (2) 1000-persons	6	Evenings; Weekends
Soccer games	East Park - soccer fields	100 (50 each field)	104 (twice a week)	2.5	Evenings; Weekends
Soccer practices	East Park – soccer fields	50 (25 each field)	104 (twice a week)	1.0	Evenings; Weekends
Soccer Tournaments	East Park – Sports courts, Lawns, and Flex Court	(2-day Tournaments) Under 10 Division = 510/day Under 8 Division = 510/day 2,040 total	1-2 times per year	All day (9:00 a.m. – 8:00 p.m.)	All Day
Volleyball, futsal games	East Park - flex court	25	104	2	Evenings; Weekends
Basketball games	East Park - flex court	25	104	2	Evenings; Weekends
Café and outdoor plaza	Arts Plaza	50	Intermittent	11 a.m. – 7 p.m.	7 days/ week
Concessions	East Park	25	Intermittent	Intermittent	Evenings; Weekends
Farmers Market	Various	150	52	4 (8 a.m. – 12 p.m.)	Mornings; Weekends
Large Events	East Park – Various Locations	3,300 (flex lawn 1 – 1,300 flex lawn 2 – 1,500 basketball court – 500)	1-2 times per year (1) 5,000-person event/year	All day (11:00 a.m. – 10:00 p.m.)	All Day

Figure 2-3: Project Site

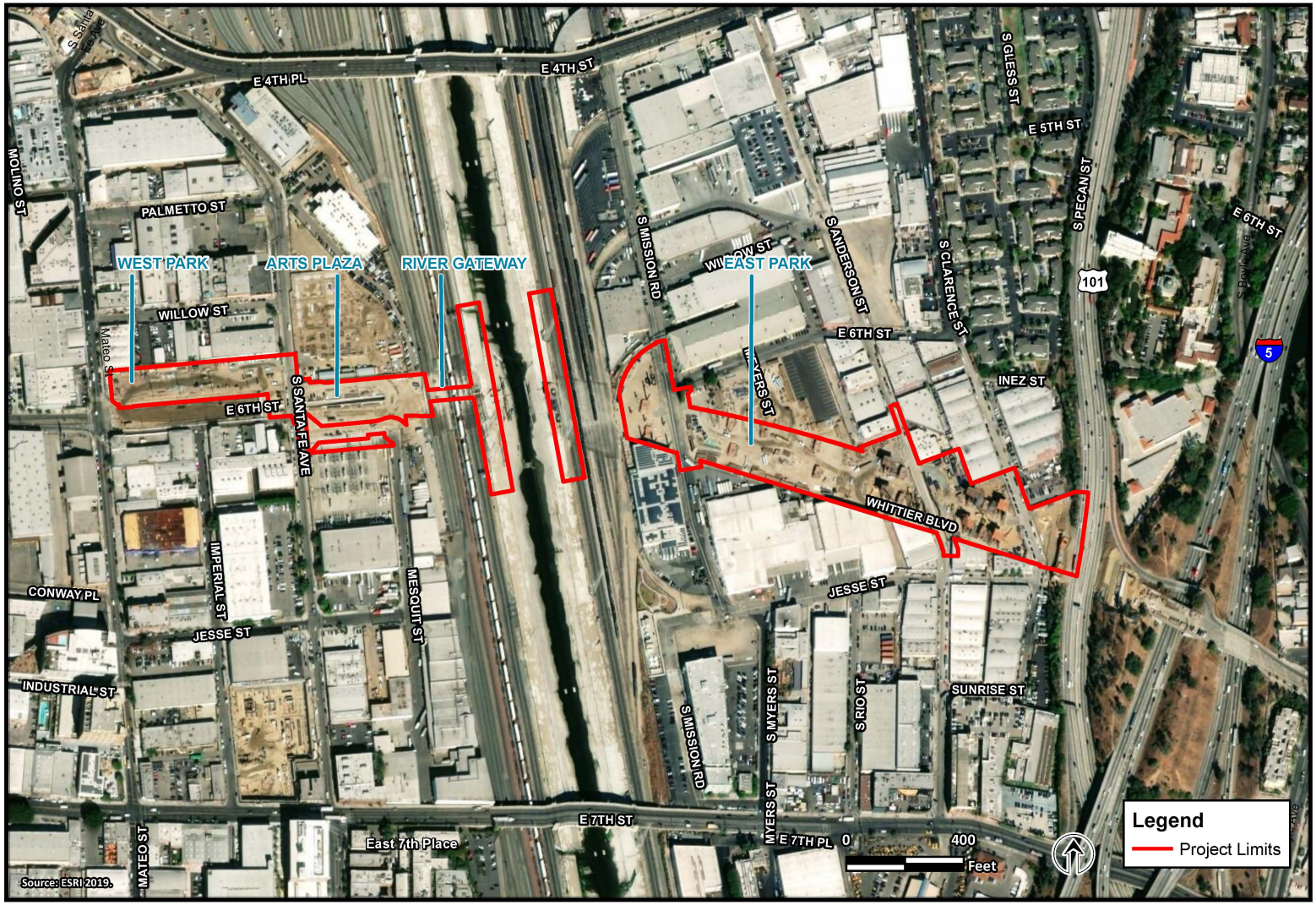

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FIGURE 2-3. PROJECT SITE
Sixth Street PARC Project

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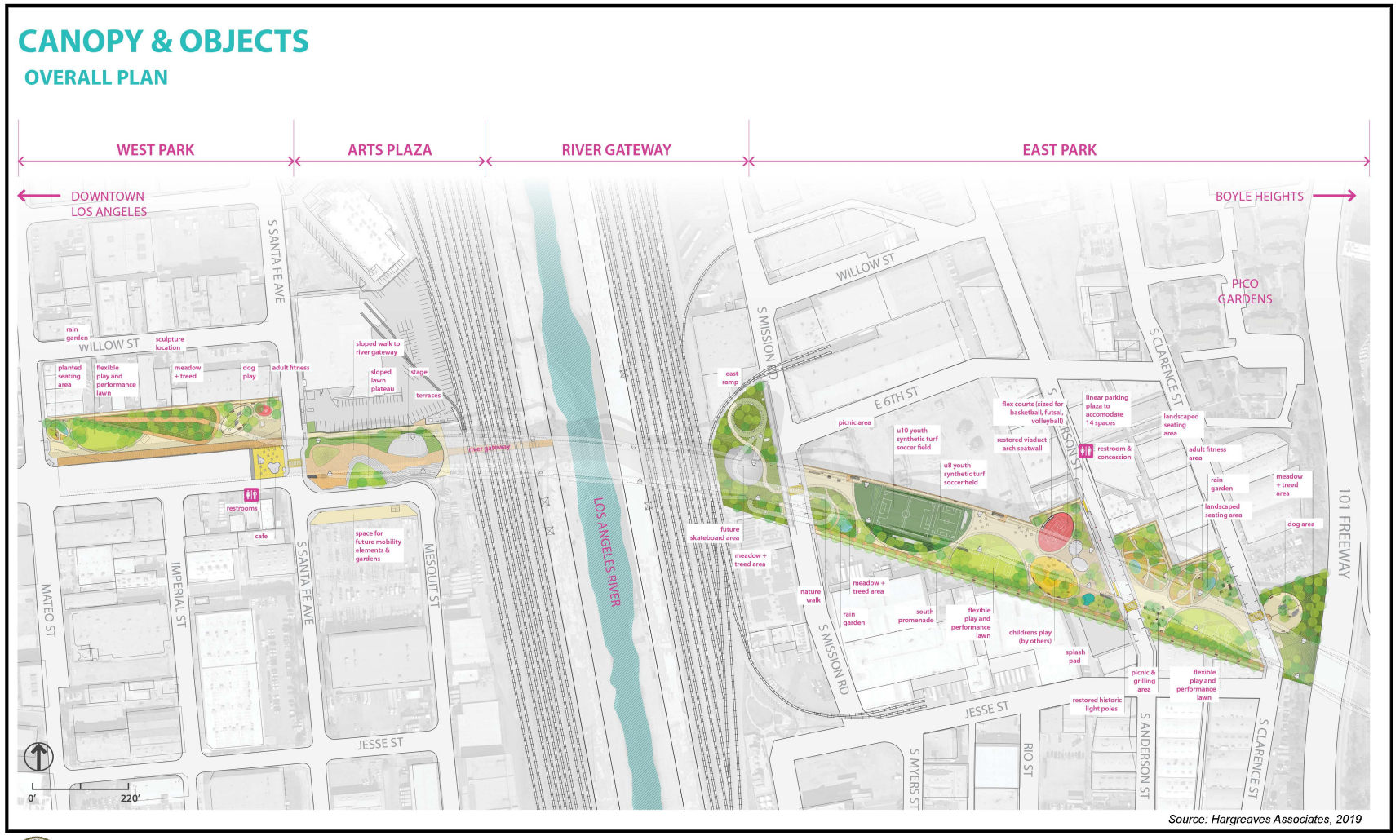
Figure 2-4: Proposed Site Plan



Source: Hargreaves Associates, 2019

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FIGURE 2-4. PROPOSED SITE PLAN
Sixth Street PARC Project

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East Park

- East Building with approximately 332-square-foot concession area, 252-square-foot public restrooms, and 635-square-foot office space and 571-square-foot storage space for City of Los Angeles Department of Recreation and Parks (RAP);
- Two synthetic turf soccer fields with field lighting, one for youth Under-8 players, and one for youth Under-10 players;
- Two flexible play and performance lawns with combined capacity to hold events up to approximately 2,800 people*;
- Adult-sized flexible sports court for basketball, futsal, and volleyball*;
- Salvaged bridge light poles and salvaged arch as barrier/seat wall*;
- Nature walk, meadow and adult fitness circuit*;
- Splash pad with outdoor shower*;
- Designated picnic and grilling areas*;
- Landscaped seating areas and rain gardens*;
- Small dog and large dog play areas*;
- On-street angled parking with 14 dedicated spaces on-site (approximately 9 of which would be used by RAP staff);
- Children's play area*; and
- Skate park elements.

West Park/Arts Plaza and River Gateway

- One approximately 620-square-foot café building with outdoor plaza seating*;
- One approximately 162-square-foot building with public restrooms;
- Arts Plaza performance area(s), public gathering/assembly areas with capacity up to approximately 1,000 people;
- One flexible play and performance lawn;
- Adult fitness equipment;
- Small dog and large dog play areas;
- Landscaped seating area;
- Rain garden;
- Reconstruction and rehabilitation of existing pedestrian/vehicular LA River Access Tunnel entrance to the River (widening the tunnel opening; resurfacing the tunnel entryway, pavement, and tunnel floor; painting; and lighting improvements). Installation of safety features, including removable

bollards or a gate to restrict vehicle access to the tunnel and warning devices to deter pedestrian access during flood events;

- Space for future electric vehicle charging station and City of Los Angeles Department of Transportation (LADOT) mobility hub elements;
- Space for secure bike parking and space for Metro bikeshare; and
- Space for future landscaped areas.

2.5.2 Phase II

Phase II would include the installation of reinforced concrete planted terraces on up to approximately 20,000 square feet of the west and east banks of the LA River channel (see **Figure 2-5**, River Channel Design Concept and **Figure 2-6**, River Channel Site Plan). Terracing would be up to approximately 10 feet wide and located as high as possible on the west and east LA Riverbanks, above the estimated Ordinary High Water Mark. The terraces would be anchored into the existing slope liner and would not require excavation into the LA River channel. All landscaping would consist of species included in the Los Angeles River Master Plan Landscaping Guidelines and Plant Palette, consistent with the City's RIO Ordinance (Ordinance Number 183145). Existing access to the LA River would be maintained.

Figure 2-5: River Channel Design Concept

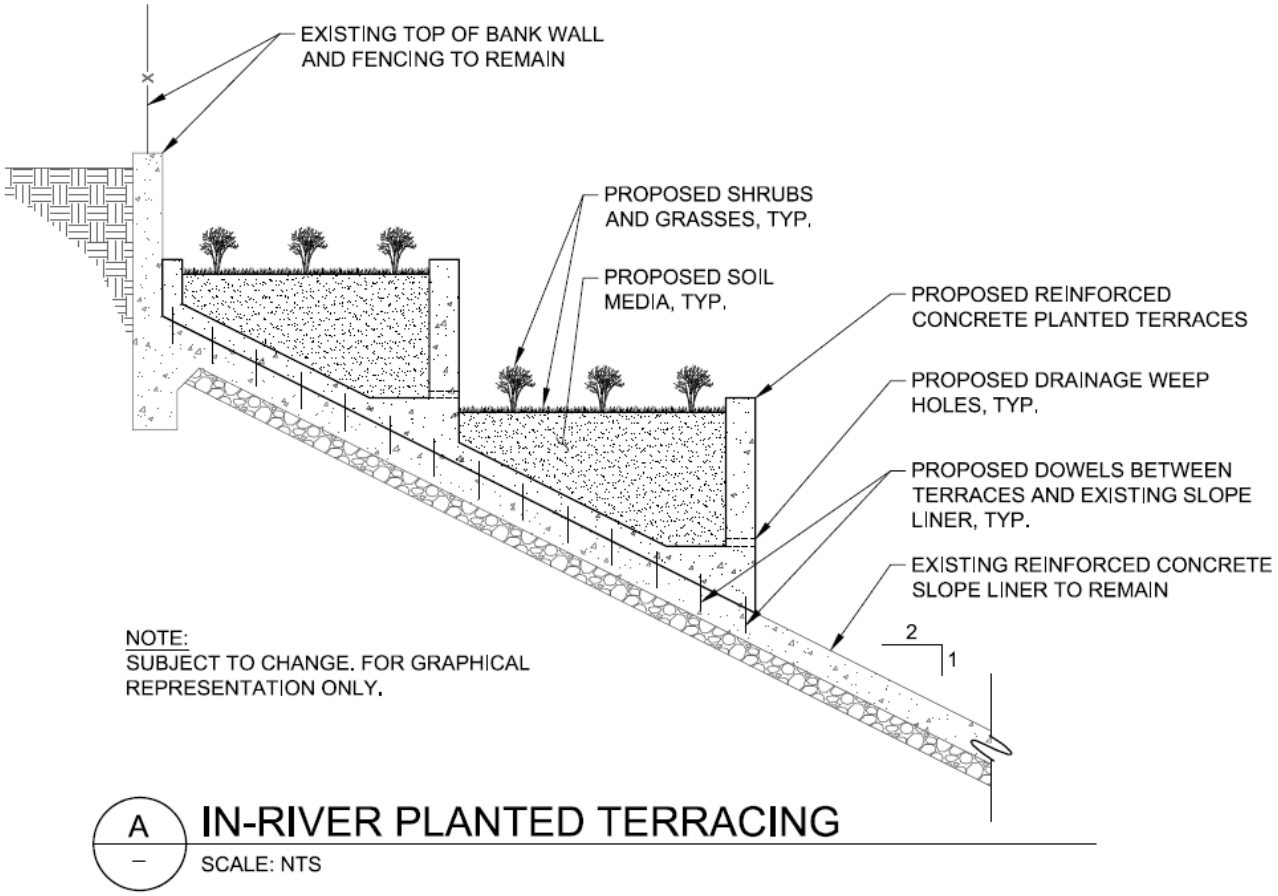

Figure 2-6: River Channel Site Plan

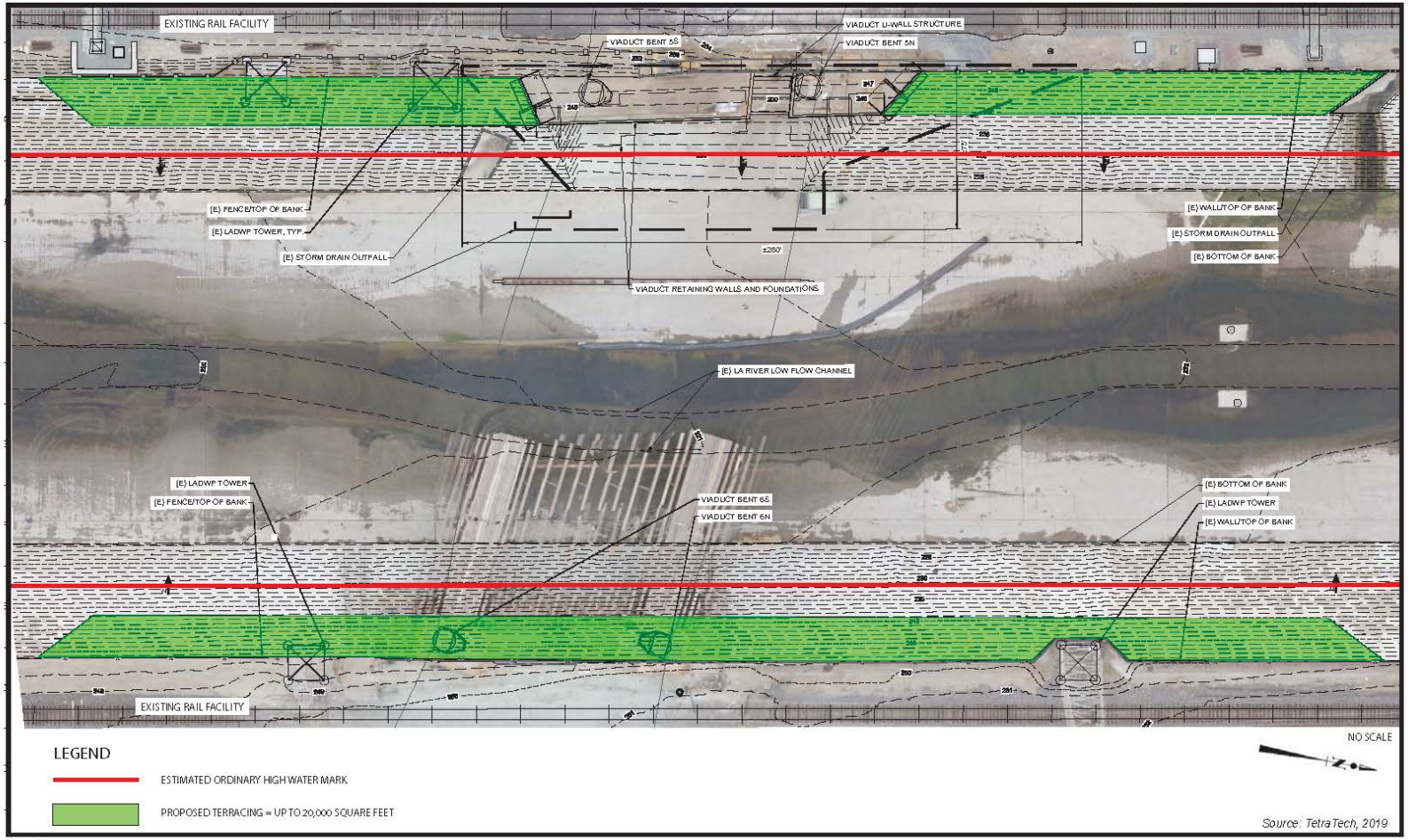

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FIGURE 2-6. RIVER CHANNEL SITE PLAN
Sixth Street PARC Project

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2.5.3 Impervious Surface Areas

The proposed Project would remove approximately 2.1 acres of impervious surfaces, which includes any remaining asphalt or concrete pavement within the Project Site and the removal of existing roadway pavement and sidewalk for the street improvements. The proposed Project would result in a net increase of impervious surfaces due to the construction of hardscaping, sports courts, buildings, playgrounds, and other public amenities. When including the impervious surface area from the upcoming Viaduct overhead, the net increase in impervious surfaces as a result of the proposed Project would be approximately 1.4 acres. With implementation of the proposed Project, the Project Site would consist of approximately 8.9 acres (71%) of impervious surfaces (including the Viaduct overhead) and up to approximately 4.1 acres (29%) of pervious surfaces.

2.5.4 PARC Operations & Lighting

The proposed operation hours of the PARC would be between 5:00 a.m. and 10:30 p.m. in accordance with Los Angeles Municipal Code Section 63.44. Recreational lighting would largely be limited to the proposed operation hours and would be consistent with the City's Municipal Code and RIO Ordinance (Ordinance Number 183145). There would be higher light levels around the sports fields to help transition from the brighter fields to the typical paths. Lighting for security would be installed throughout the PARC to protect people and property, and illuminated in accordance with the Illuminating Engineering Society (IES) standards, *IES RP-33-14 Lighting for Exterior Environments* and IES G-1-03 *Security Lighting for People, Property and Public Spaces*, as updated by IES G-1-16 *Guide for Security Lighting for People, Property and Critical Infrastructure*. Luminaires with shielded optics would be used, and the PARC would be designed to infill lighting in areas where architectural and bridge elements could impede the flow of light.

2.6 Real Estate Acquisitions

No right-of-way (ROW) or temporary construction easements (TCE) would be required and no displacements or relocations would result from the proposed Project. However, a temporary "Permit to Enter" may be required from property owners at the boundaries of the Project Site that border adjacent private properties. In these areas, the contractor may need to enter private properties in order to complete construction work within the Project Site.

2.7 Project Schedule

The proposed Project would include two construction phases. Construction of Phase I would begin at or near the completion of the Viaduct Replacement Project. The Viaduct construction is expected to be completed by mid-2022 but is subject to change. The duration of construction for Phase I is expected to last approximately two years. Assuming Phase I construction starts in September 2022, construction is anticipated to be completed in 2024.

Phase II elements would be constructed independently of Phase I elements. The duration of Phase II is assumed to be 6 months. Phase II construction is anticipated to begin in 2025 or later but may proceed concurrently with Phase I. The timing of construction depends on a number of variables, such as

availability of funding for design and construction, as well as review and approval of LA River modifications from the United States Army Corps of Engineers (USACE). For purposes of this environmental review, Phase I and II construction activities are assumed to overlap.

2.8 Project Design Changes

The City prepared a Notice of Preparation/Initial Study (NOP/IS) for the proposed Project, dated April 13, 2017. Several proposed Project elements that were presented in the NOP/IS are no longer being considered because they have since been determined to be infeasible or cost prohibitive due to budgetary constraints, which include the following:

- Construction of a bikeway within the LA River channel bank adjacent to the proposed Arts Plaza, extending from Fourth Street to Seventh Street, with connections to the bridge structures. Metro is currently studying construction of a proposed bikeway in this area as part of the separate Los Angeles River Project. More details can be found here: https://www.metro.net/projects/lariverpath/
- Colored concrete pavement to delineate limits of all park areas.
- Stormwater capture and reuse.

In addition, work in the LA River channel would now occur at a separate phase (Phase II) from the remainder of the proposed West Park, Arts Plaza, and East Park (Phase I). This is due to the additional approvals and permits that would be needed for these activities.

2.9 Relationship to Other Projects

The proposed Project is located underneath and adjacent to the Viaduct Replacement Project. The City has completed the design to replace the Viaduct, and the Viaduct was demolished in 2016. Construction of the new Viaduct has begun, and it is anticipated to be substantially complete in 2022.

Other federally funded projects in proximity to the proposed Project have components which include intersection improvements for bicycles and pedestrians, landscaping features, and bicycle lanes in the proposed Project Area. Three separate projects that are associated with the proposed Project include Active Transportation Program (ATP) projects that are federally funded but administered through Metro. ATP-1: Sixth Street Viaduct Replacement Project Bicycle and Pedestrian Facilities (currently in design), ATP-2: Boyle Heights Pedestrian Linkages (currently in design), and ATP-3: Downtown LA Arts District Pedestrian and Cyclist Safety Project (currently in design) include improvements to the safety and accessibility of bicycle and pedestrian facilities in the vicinity of the proposed Project.

Other development projects in proximity to the Project Area are included in **Table 1-1** in Chapter 1 (see **Figure 1-2**, Development Projects)**.**

2.10 Responsible Agencies and Project Approvals

Table 2-2 includes a list of responsible agencies that were contacted regarding the proposed Project. Other public agencies in proximity to the Project Area were also contacted.

Table 2-2: Responsible Agencies

Responsible Agency	Anticipated Permits, Approvals, and Related Issues
Federal	
United States Army Corps of Engineers	Rivers and Harbors Act Section 408 Permit, includes National Environmental Quality Act (NEPA) approval Clean Water Act (CWA) Section 404 Permit
Federal Railroad Administration	Any applicable permits
Federal Transit Administration	Any applicable permits
State	
Department of Toxic Substances Control	Any applicable permits
California Department of Fish & Wildlife	Section 1602 Streambed Alteration Agreement
California State Historic Preservation Office	Section 106 consultation
Regional	
Regional Water Quality Control Board	CWA Section 401 Water Quality Certification National Pollutant Discharge Elimination System (NPDES) Permit
LA County Metropolitan Transportation Authority	Any applicable permits, coordination related to public transit and bikeways, and adjacent facilities
LA County Fire Department	Review and advise on site remediation plans
South Coast Air Quality Management District	Any applicable permits
Local	
City of Los Angeles Recreation and Parks Department	Responsible for operation and maintenance of portions of the park
City of Los Angeles Planning Department	Potential changes to land use designations or zoning, as well as street designations Any applicable permits
City of Los Angeles Department of Water and Power	Any applicable permits, coordination, and approval
LA Sanitation	LID Compliance, system design coordination (if applicable), system design approval (if applicable), and maintenance of a portion of stormwater infrastructure (if applicable)
City of Los Angeles Fire Department	Any applicable permits, coordination related to emergency access
City of Los Angeles Department of Transportation	Non-CEQA Transportation Assessment Guidelines Consistency Review

	Traffic management plans
City of Los Angeles Bureau of Street Lighting	Street lighting design and approval
City of Los Angeles Board of Public Works	Recommendations regarding Project approval and Environmental Impact Report (EIR) certification
Los Angeles City Council	Project approval and certification of EIR
City of Los Angeles Department of Building and Safety	Any applicable permits
City of Los Angeles Cultural Affairs Department	Any applicable permits and coordination related to public art
All railroad agencies owning and operating railroad tracks along both sides of the River	Railroad Maintenance Agreement for work within railroad ROW

Figure 2-7: East Park Site Plan

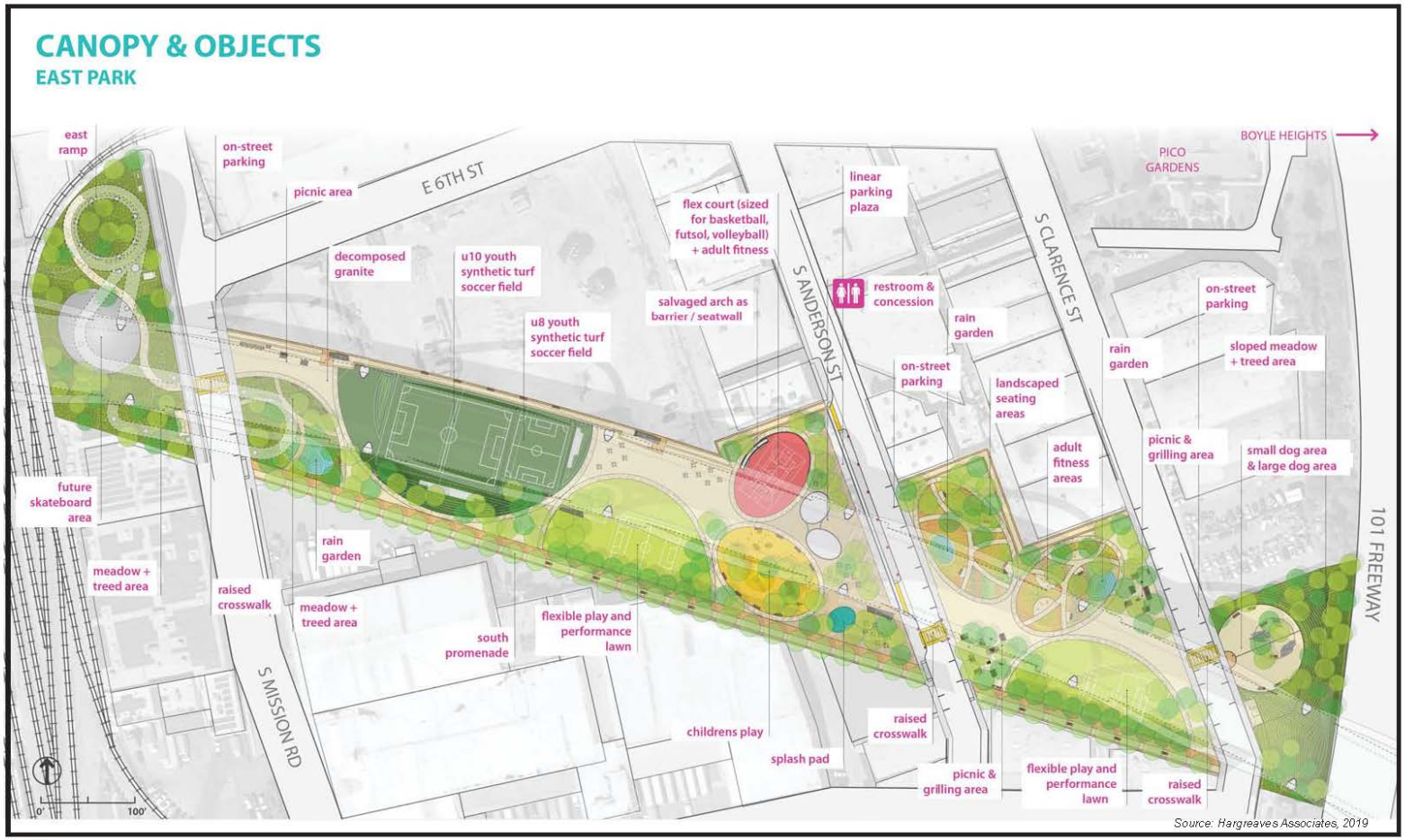

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FIGURE 2-7. EAST PARK SITE PLAN
Sixth Street PARC Project

Figure 2-8: East Park – Soccer Fields

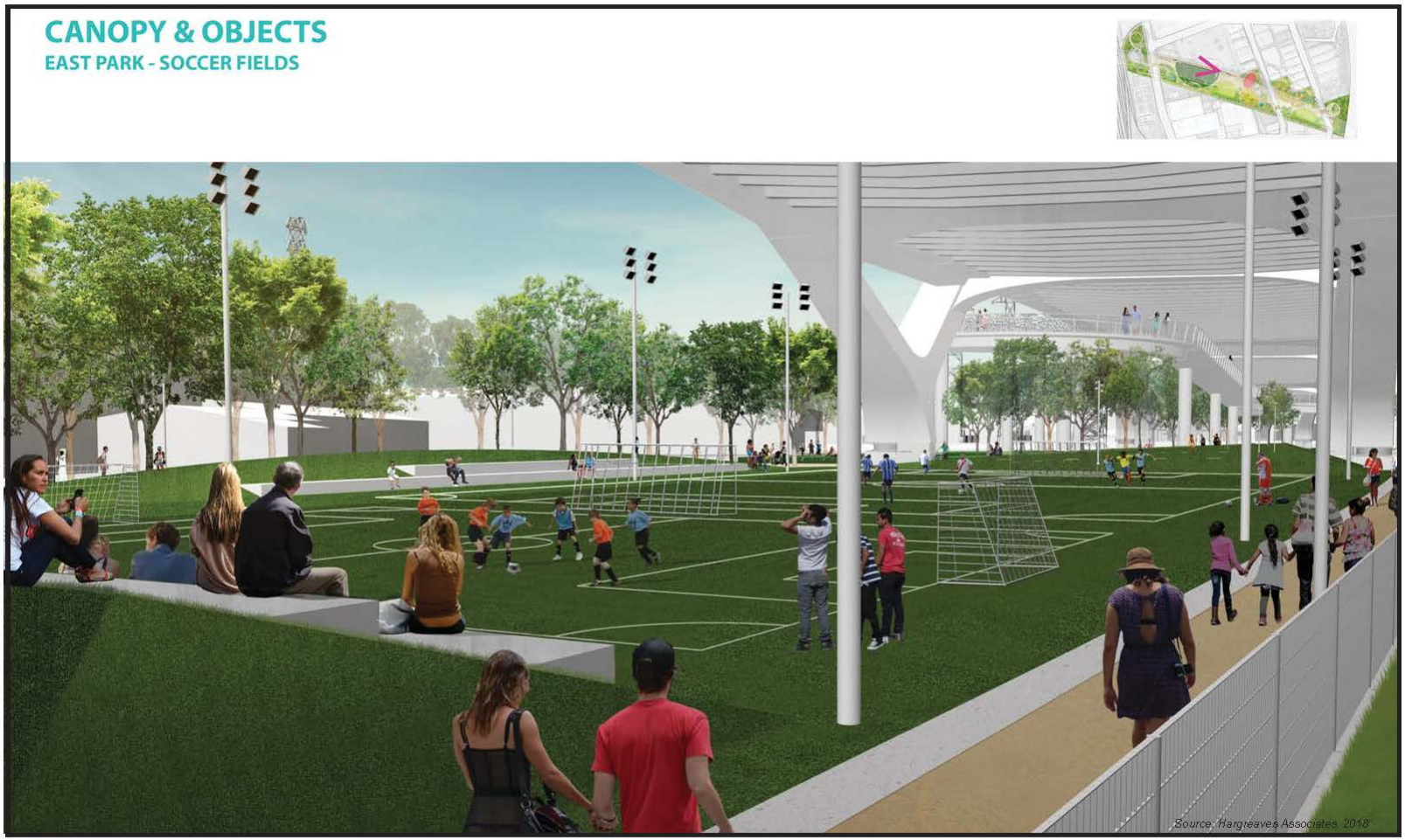

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FIGURE 2-8. EAST PARK - SOCCER FIELDS
Sixth Street PARC Project

Figure 2-9: East Park – Children's Play Area & Plaza

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FIGURE 2-9. EAST PARK - CHILDREN'S PLAY AREA & PLAZA
Sixth Street PARC Project

Figure 2-10: East Park – Dog Park

FIGURE 2-10. EAST PARK - DOG PARK
Sixth Street PARC Project

Figure 2-11: West Park Site Plan

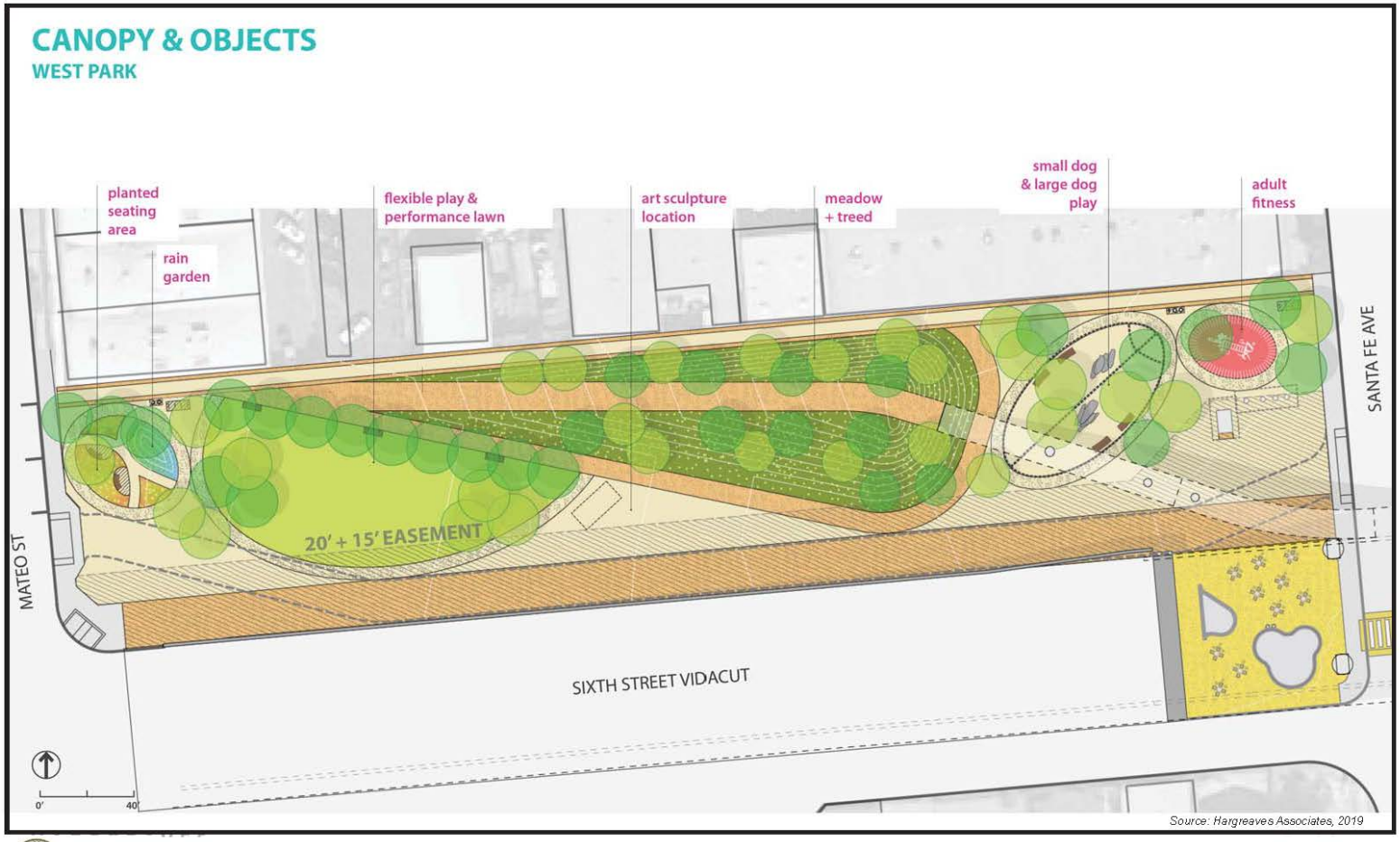

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FIGURE 2-11. WEST PARK SITE PLAN
Sixth Street PARC Project

Figure 2-12: West Park – Aerial

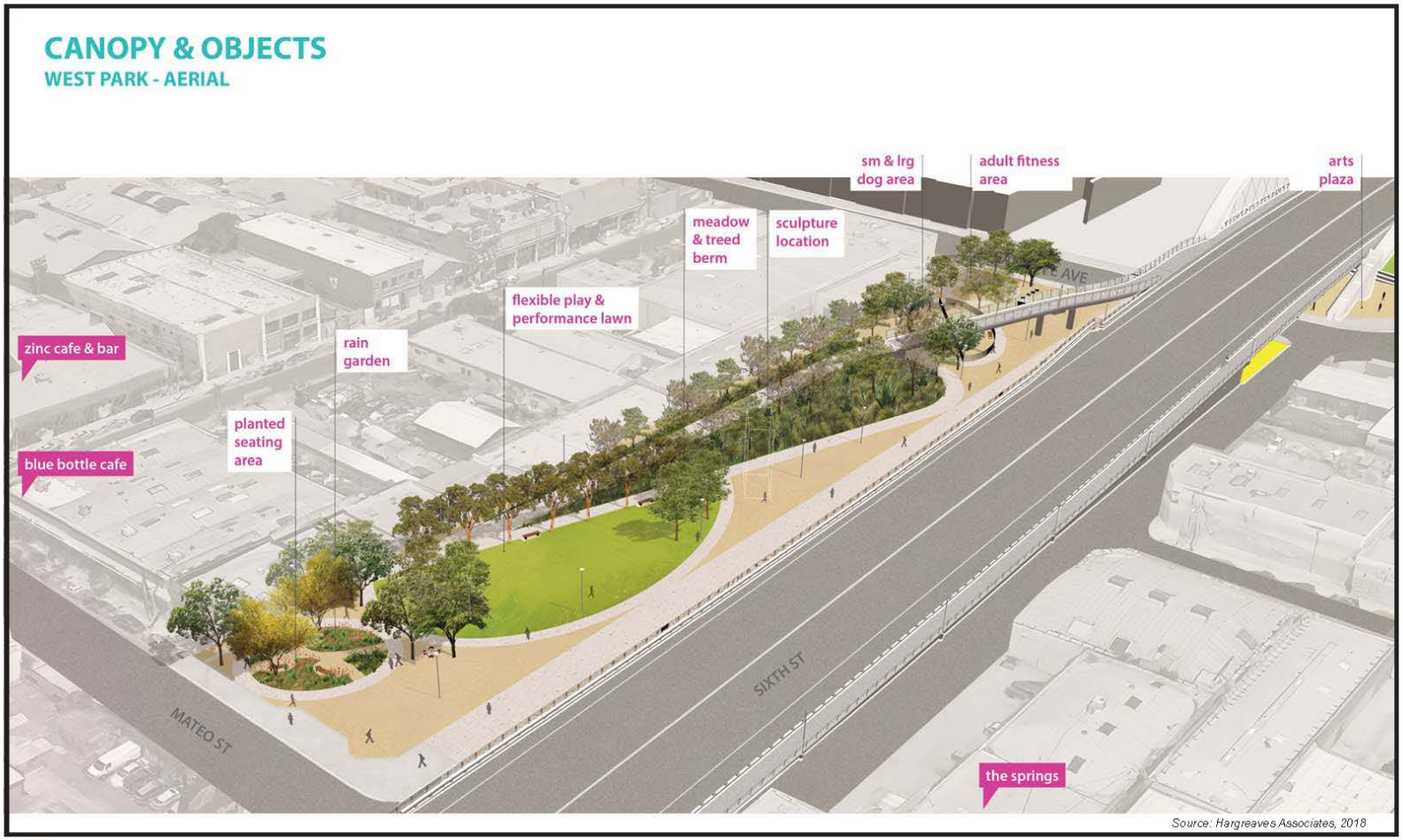

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FIGURE 2-12. WEST PARK - AERIAL
Sixth Street PARC Project

Figure 2-13: West Park – View from Mateo Street

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FIGURE 2-13. WEST PARK - VIEW FROM MATEO STREET
Sixth Street PARC Project

Figure 2-14: West Park – Sloped Walk from Viaduct

FIGURE 2-14. WEST PARK - SLOPED WALK FROM VIADUCT
Sixth Street PARC Project

Figure 2-15: Arts Plaza Site Plan

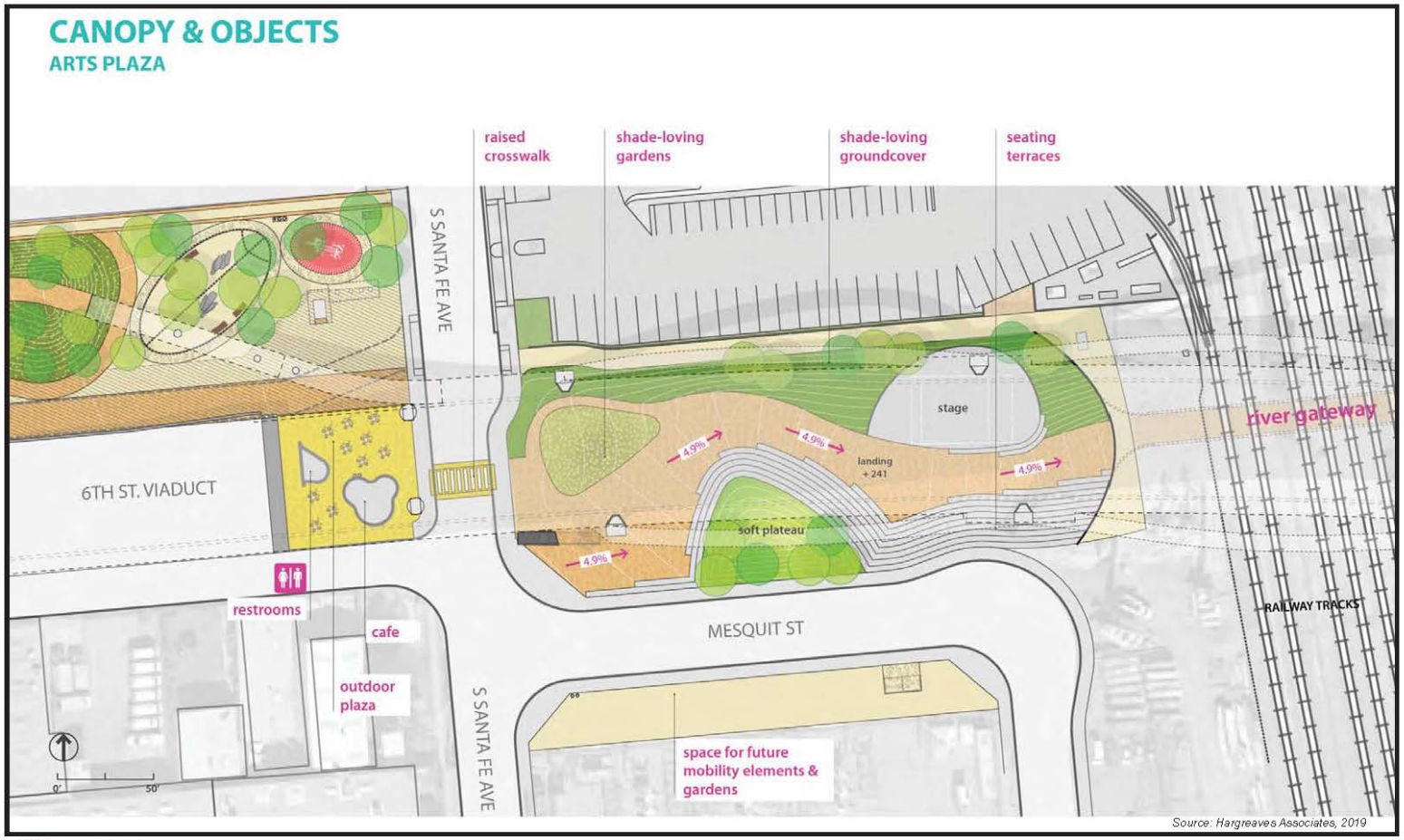

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FIGURE 2-15. ARTS PLAZA SITE PLAN
Sixth Street PARC Project

Figure 2-16: Arts Plaza – Aerial

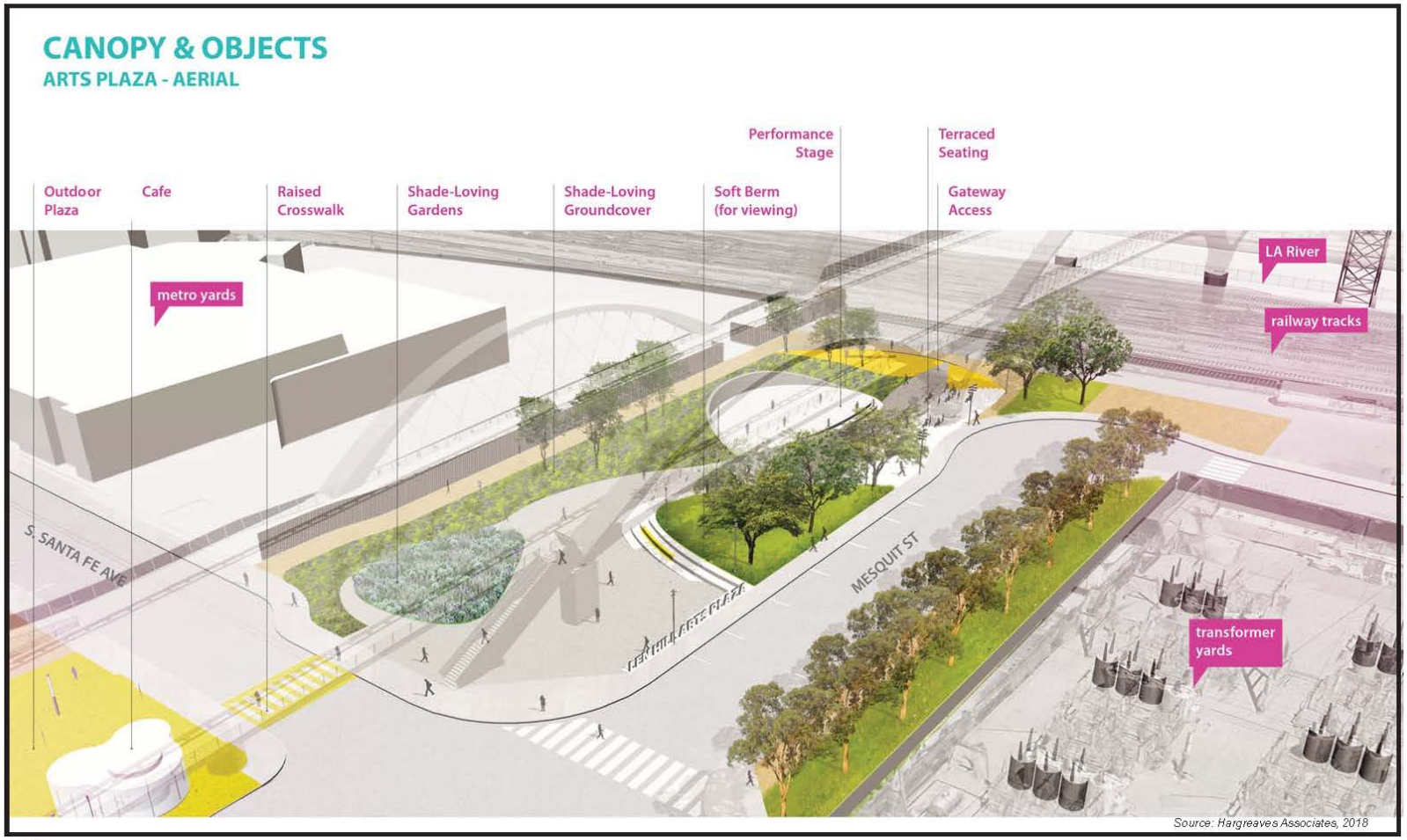

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FIGURE 2-16. ARTS PLAZA - AERIAL
Sixth Street PARC Project

Figure 2-17: Arts Plaza – View of Performance Stage (Non-Event)

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FIGURE 2-17. ARTS PLAZA - VIEW OF PERFORMANCE STAGE (NON-EVENT)
Sixth Street PARC Project

Figure 2-18: Arts Plaza – View of Performance Stage (Event)

FIGURE 2-18. ARTS PLAZA - VIEW OF PERFORMANCE STAGE (EVENT)
Sixth Street PARC Project

Figure 2-19: Arts Plaza – View from Upper Walkway (Non-Event)

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FIGURE 2-19. ARTS PLAZA - VIEW FROM UPPER WALKWAY (NON-EVENT)
Sixth Street PARC Project

Figure 2-20: View from Upper Walkway (Event)

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FIGURE 2-20. ARTS PLAZA - VIEW FROM UPPER WALKWAY (EVENT)
Sixth Street PARC Project

Chapter 3

Environmental Impact Analysis

3.1 Aesthetics

This section describes the affected environment and regulatory setting for Aesthetics related to the Project Area and surrounding area. In addition, this section describes the potential impacts related to Aesthetics that would result from the implementation of the proposed Project. As noted in the analysis below, impacts associated with Aesthetics during construction or operation of the proposed Project would be less than significant and no mitigation measures are required.

The information in this section is based on the Visual Impact Assessment (VIA) prepared for the proposed Project (GPA Consulting, 2019), located in Appendix B.

3.1.1 Introduction

3.1.1.1 Defining Quality and Character of Visual Resources

Visual Character

Visual character is described by the topography, land use, form, color, line, texture, and natural resources depicted in the view. Assessment of visual character is intended to be descriptive rather than evaluative. Visual character is based on defined attributes, such as physical traits; pattern character traits; and the dominance, scale, and diversity or continuity of visual elements.

Visual Quality

Visual quality describes the aesthetics of a view. Determining visual quality can be subjective because it is partly based on the viewer's idea of what constitutes a quality setting. To provide a more objective framework, this assessment combines the evaluative criteria (i.e., vividness, intactness, and unity) and qualitative rankings (i.e., low, medium, and high) presented in the Federal Highway Administration's (FHWA) *Visual Impact Assessment for Highway Projects*, along with the *L.A. CEQA Thresholds Guide* criteria. Though FHWA's guidelines are the accepted standard for evaluating the visual effects associated with highway and railroad projects, the guidelines also apply to a wide range of non-transportation projects.

The three criteria for evaluating visual quality include:

- **Vividness:** The visual power or memorability of landscape components as they combine in distinctive visual patterns.
- **Intactness:** The visual integrity of the natural and human-built landscape and its freedom from encroaching elements. Intactness can occur in well-kept urban and rural landscapes, as well as in natural settings.
- **Unity:** The visual coherence and compositional harmony of the landscape considered as a whole. It frequently attests to the careful design of individual human-made components in the landscape.

Views of high quality often have topographic relief, a variety of vegetation, rich colors, impressive scenery, and unique natural and/or built features. The FHWA evaluates visual quality based on an average of the ranking scales for vividness, intactness, and unity.

Viewer Response

Viewer response includes viewer exposure and viewer sensitivity. The assessment of these elements predicts how the public might react to visual changes brought about by a development project.

Viewer exposure measures the number of viewers exposed to the resource change, type of viewer activity, duration of their view, speed at which the viewer moves, and position of the viewer. In areas with high viewer exposure, early consideration of design, art, and architecture become more important. Depending on distance or intervening structures, viewers may experience varying degrees of visibility to and from a project.

Viewer sensitivity includes the viewer's concern for scenic quality and the viewer's response to changes in the visual resources that make up the view. Viewer sensitivity varies based on local values and goals. The perception of visual quality and the sensitivity of viewers to changes in visual quality varies based on the viewer's familiarity with the view, their sense of ownership of the view, and the nature of the viewer's activity while receiving the view. For example, residential viewers typically have a high sensitivity to visual quality and changes in visual quality because of their familiarity with the view over a period of time, investment in the area (e.g., homeowners or long-time residents), and sense of ownership of the view. In contrast, commuting motorists that travel for the purposes of getting from one place to another for work or errands would have an average level of sensitivity. However, motorists traveling for pleasure would be more sensitive to their surroundings. The level of sensitivity changes depending on the degree of familiarity the viewer has with the visual setting and the viewer's concern for scenic quality.

Key Views

Because analyzing all of the potential views of the proposed Project would be infeasible, key viewpoints were selected at five locations within the Project Area to represent the visual effects of the proposed Project. These key views also represent the primary viewer groups that could be affected by the proposed Project. For the purposes of this analysis, a view is considered a key view if at least one of the following circumstances applies:

- Visual resources are present, regardless of the quality of the view. The sensitivity of the affected viewer group is medium or high, and the duration of the view is long-term.
- The quality of the view is medium or high, regardless of whether visual resources are present. The sensitivity of the viewer group is medium or high, and the duration of the view is long-term.
- The view is distinct, clear, and unobstructed from the street to adjacent businesses, and is viewed regularly by a large number of commuters. In this case, the viewer sensitivity is medium, and the view is long-term.

For the purposes of this EIR, key observation points (KOPs) are the key views that are most representative of the visual character and quality of the Project Area. The five KOPs in the Project Area,

which were determined in the VIA prepared for the proposed Project, are described in more detail in Section 3.1.3.1.

3.1.2 Regulatory Setting

3.1.2.1 City of Los Angeles Municipal Code

The City of Los Angeles Municipal Code (LAMC) includes regulations pertaining to aesthetics and visual quality. The following Municipal Code sections provide standards for the design, location, and arrangement of visual resources within a project area, including zoning and land uses, landscaping, street lighting systems, etc.

LAMC Chapter 1, Article 2, Section 12.04.05 – Open Space (OS) Zone

Open Space Zoning provides regulations for publicly owned land in order to implement the City's adopted General Plan, including the Open Space, Conservation and Public Recreation Elements. Implementation of the General Plan serves to protect and preserve natural resources and natural features of the environment; provide outdoor recreation opportunities and advance the public health and welfare; enhance environmental quality; encourage the management of public lands in a manner which protects environmental characteristics; and encourage the maintenance of open space uses on all publicly owned park and recreation land.

LAMC Chapter 1, Article 2, Section 12.42E2

All planting shall be coordinated with all signs and lighting on a project site, both upon installation of the planting and upon the planting reaching its maximum designed size. All shall be designed such that one will not interfere with the other, nor require excessive maintenance.

LAMC Chapter 1, Article 2, Sec. 12.21A5(k)

All lights used to illuminate a parking area shall be designed, located and arranged so as to reflect the light away from any streets and any adjacent premises.

LAMC Chapter 1, Article 3, Section 13.17A – River Improvement Overlay District

The purpose of a River Improvement Overlay (RIO) District is to:

- Support the goals of the Los Angeles River Revitalization Master Plan
- Contribute to the environmental and ecological health of the City's watersheds
- Establish a positive interface between river adjacent property and river parks and/or greenways
- Promote pedestrian, bicycle and other multi-modal connection between the river and its surrounding neighborhoods
- Provide an aesthetically pleasing environment for pedestrians and bicyclists accessing the river area
- Provide safe, convenient access to and circulation along the river
- Promote the river identity of river adjacent communities

LAMC Chapter 1, Article 3, Section 13.17F – River Improvement Overlay District

A Project shall conform to all of the following RIO district development regulations:

- Landscaping
    - Landscaping shall conform to the following regulations: 75 percent of any Project's newly landscaped area shall be planted with any combination of the following: native trees, plants and shrubs, or species defined as WatershedWise, or species listed in the Los Angeles County River Master Plan Landscaping Guidelines and Plant Palettes.
- Screening/Fencing
    - Electrical transformers, mechanical equipment, water meters and other equipment shall be screened from public view. The screening may be opaque or perforated, provided that not more than 50 percent of the face is open. The screen shall be at least 6 inches taller than the equipment and not more than 2 feet taller than the equipment.
- With the exception of single-family homes, all projects facing a street that cross the river or terminate at the river or a river frontage road shall have all fences within the front or side yards visible from said street consistent with the fence designs identified in the Los Angeles County River Master Plan Landscape Guidelines Exterior Site Lighting.
    - All site and building mounted lighting shall be designed such that it produces a maximum initial luminance value no greater than 0.20 horizontal and vertical foot candles at the site boundary, and no greater than 0.01 horizontal foot candles 15 feet beyond the site. No more than 5.0 percent of the total initial designed lumens shall be emitted at an angle of 90 degrees or higher from nadir (i.e., straight down).
    - All low-pressure sodium, high pressure sodium, metal halide, fluorescent, quartz, incandescent greater than 60 watts, mercury vapor, and halogen fixtures shall be fully shielded.
- Projects located partially or wholly within the Inner Core shall also conform to the following regulations
    - Landscape Buffer. All Projects shall provide a 10-foot landscape buffer as measured from the Project's property line adjacent to the river except where a roadway is located within that 10 feet. New building structures or parking shall not be permitted within the 10-foot landscape buffer.
    - Fence. All fences located within 10 feet of the river corridor or a river frontage road street or any adjacent street shall be consistent with the fence designs identified in the Los Angeles County River Master Plan Landscape Guidelines. With the exception of single-family homes, all Projects shall be required to maintain a visual connection between the river corridor and/or frontage road and the abutting property.
    - Fence Height. All fences located less than 10 feet from the river shall be no higher than 6 feet in height. All fences located at the 10-foot landscape buffer setback line shall not exceed 10 feet in height.

- Gates. All gates or fences located within 10 feet of the river or a river frontage road shall be consistent with the gate designs identified in the Los Angeles County River Master Plan Landscape Guidelines. The gate height shall be consistent with the adjacent fence height and the gate shall be designed so as not to encroach into either the river, street or public right-of-way when opened.
- River Access. With the exception of single-family homes, all river adjacent projects that partially or wholly abut the river shall have Americans with Disabilities Act compliant access gates from their property to the river. The gates shall also be accessible for bicycle entry. Access may be controlled and limited to residents, employees and/or visitors of the project.
- Riverfront Door. All projects located either adjacent to the river corridor or frontage road shall include a riverfront door visible to, and accessible from, the river corridor or frontage road.

LAMC Chapter 1, Article 7, Sec. 17.08C

Plans for street lighting system shall be submitted to and approved by the Bureau of Street Lighting.

LAMC Chapter 9, Article 3, Section 93.0117

No person shall construct, establish, create, or maintain any stationary exterior light source that may cause the following locations to be either illuminated by more than two foot-candles (21.5 lx) of lighting intensity or receive direct glare from the light source. Direct glare, as used in this subsection is a glare resulting from high luminance or insufficiently shielded light sources that is in the field of view.

- Any ground surface intended for use but not limited to recreation, barbecue, or lawn areas on any other property containing a residential unit or units

3.1.2.2 City of Los Angeles General Plan

As required by the State of California, the City's General Plan addresses goals, policies, and standards related to land use, circulation, housing, conservation, open space, noise, and safety (City of Los Angeles, 2017). To address goals that meet the unique needs of the City, the General Plan also includes elements related to health and wellness, air quality, historic preservation and cultural resources, and public facilities and services. Several of the General Plan elements are currently being updated. The General Plan elements that pertain to Aesthetics are described in more detail in the following sections.

Open Space Element

The Open Space Element of the City's General Plan provides information to guide decision makers and interested citizens regarding the identification, preservation, conservation, and acquisition of open space in the City (Los Angeles Department of City Planning, 1973). The Element aims to ensure that the City has sufficient open space to meet its recreational, environmental, health, and safety needs. In addition, the Element aims to conserve and preserve the City's environmental resources, as well as provide open spaces that contribute to the City's identity, form, and visual framework. Specific policies pertaining to Aesthetics include (a) consideration of aesthetics in grading plans, and (b) the establishment of scenic corridors. The following Open Space goals, objectives, and policies pertaining to aesthetics are applicable to the proposed Project:

Goals:

- Provide an open space system which provides identity, form, and a visual framework to the City.

Objectives:

- Identify the need and methods of providing for open space in proposed centers and impacted areas of the City. Impacted areas are generally characterized by factors including low incomes, high incidence of crime, and low educational achievement.

Policies:

- The amount of earth moved in grading operations within desirable open space areas should be limited and closely controlled. Aesthetic consideration should be incorporated into the City's approval of grading plans in these areas.
- Scenic corridors should be established where designated. Each corridor should be specifically "tailored" to the needs of the area and the scenic values to be preserved. Specific studies including implementing ordinances should be prepared for each scenic corridor.

Central City North Community Plan

The Central City North Community Plan summarizes the most significant land use issues and opportunities that the community faces (City of Los Angeles, 2000). Among these issues, the Community Plan includes goals, objectives, and policies related to provide park facilities and open space for the purposes of serving the recreational, environmental, and health needs of the community, as well as protecting environmental and aesthetic resources. The Central City North Community Plan is being updated, but the update is not anticipated to be complete before the public comment period for the Draft EIR Specific policies pertaining to Aesthetics within the Community Plan include: (a) ensuring that parks are adequately illuminated for safe use at night, and (b) providing a visual balance between open space and urban development within the Community Plan area. The following aesthetics-related planning goals, objectives, and policies are presented in the community plan:

<u>Recreation and Parks Facilities</u>

Goals:

- 4: Adequate recreation and park facilities which meet the needs of the residents in the Plan Area.

Objectives:

- 4-1: Conserve, maintain and better utilize existing recreation and park facilities which promote the recreational needs of the community.

Policies:

- 4-1.1: Preserve the existing recreational facilities and park space.

Open Space

Goals:

- 5: A community with sufficient open space in balance with development to serve the recreational, environmental and health needs of the community and to protect environmental and aesthetic resources.

Objectives:

- 5-1: Preserve existing open space resources and where possible develop new open space.
- 5-2: Ensure the accessibility, security and safety of parks by their users, particularly families with children and senior citizens.

Policies:

- 5-1.1: Encourage the retention of passive and visual open space which provides a balance to the urban development of the Plan Area.
- 5-2.1: Ensure that parks are adequately illuminated for safe use at night where appropriate.

Boyle Heights Community Plan

The Boyle Heights Community Plan sets forth goals, objectives, policies, and implementation programs that pertain to Boyle Heights. The Boyle Heights Community Plan is being updated, but the update is not anticipated to be complete before the public comment period for the Draft EIR. The following aesthetics-related planning goals, objectives, and policies are presented in the community plan (City of Los Angeles, 1998):

Objectives:

- Provide adequate recreation and park facilities which meet the needs of the residents in the community.
- Conserve, maintain, and better utilize existing recreation and park facilities which promote the recreational experience.

Policies:

- Preserve and improve the existing recreation and park facilities and park space.

The Boyle Heights Community Plan is currently being updated, with a Draft Boyle Heights Community Plan released in 2017.

3.1.2.3 Los Angeles River Revitalization Master Plan

The Los Angeles River Revitalization Master Plan (LARRMP) includes plans to construct a continuous river greenway, providing habitat restoration, open spaces, and pedestrian and bicycle paths along the Los Angeles River (City of Los Angeles, 2007). The Plan includes a 32-mile long and 1-mile wide planning area, with goals that include, but are not limited to, establishing guidelines for land use and development around the LA River; enhancing and improving communities adjacent to the river; improving public access to the river; and providing recreation and open space. The LARRMP includes requirements for landscaped areas, guidelines for improvements to the visibility of the LA River, and guidelines for

introducing art. The following goals and recommendations within the LARRMP are applicable to the visual quality and character of the Sixth Street PARC Project:

Goal 1: Create a continuous river greenway

- Establish a River Buffer area within, and adjacent to, the Los Angeles River that meets riparian or upland habitat requirements.
- Extend open space, bike paths, and multi-use trails into the tributaries.

Goal 2: Connect neighborhoods to the river

- Provide green arterial connections to the Los Angeles River. Where suitable, landscaped areas should be designed to meet upland habitat requirements.
- Create safe, non-motorized routes between the Los Angeles River and cultural institutions, parks, civic institutions, transit-oriented development, schools, transit hubs, and commercial and employment centers within one mile of the Los Angeles River.
- Increase direct pedestrian and visual access to the Los Angeles River.

Goal 3: Extend open space and water quality features into neighborhoods

- Increase open space throughout the Los Angeles River Corridor. Where suitable, landscaped areas should be designed to meet upland habitat requirements.
- Provide a diverse system of interconnected parks, recreational fields, and outdoor classrooms.
- Incorporate best management practices in streetscapes and all public landscapes.

Goal 4: Enhance river identity

- Identify physical opportunities to improve the visibility of the Los Angeles River Corridor.
- Identify opportunities to improve public perception of the Los Angeles River Corridor.
- Encourage local and diverse character within the Los Angeles River Corridor.

Goal 5: Incorporate public art along the river

- Identify physical opportunities to introduce art along the Los Angeles River.
- Create a River arts program that reflects and celebrates the history of the Los Angeles River and the diverse cultures of its surrounding neighborhoods.

3.1.2.4 Bureau of Street Lighting Design Standards and Guidelines

The Bureau of Street Lighting *Design Standards and Guidelines* manual provides standards for engineers with regards to designing street lighting systems (Bureau of Street Lighting, 2007). The manual provides approval requirements; illumination standards for various areas, roadways, and pedestrian walkways; design considerations; and equipment selection standards.

3.1.2.5 LA River Design Guidebook

The *LA River Design Guidebook* provides design recommendations that complement the Los Angeles River Revitalization Master Plan and the design guidelines associated with the RIO district (City of Los Angeles, 2016). The Guidebook is intended for use by the communities of Boyle Heights, Arts District, Lincoln Heights, and Chinatown East, and incorporates the input of residents, stakeholders, and representatives from these communities. The *LA River Design Guidebook* provides recommendations for improving and unifying the aesthetic quality of the LA River and surrounding communities.

3.1.2.6 Los Angeles County: LA River Master Plan

The *Los Angeles County LA River Master Plan* was originally published in 1996 to provide for the optimization and enhancement of aesthetic, recreational, flood control, and environmental values by creating a community resource, enriching the quality of life for residents, and recognizing the river's primary purpose for flood control (Los Angeles County Department of Public Works, 1996). The plan encompasses all 51-miles of the river, in addition to the Tujunga Wash, which is 9 miles long. The river touches 13 cities and 9 Los Angeles City Council Districts, all of which are addressed in the Master Plan document. The LA River Master Plan goals aim to:

- Ensure flood control and public safety needs are met.
- Improve the appearance of the river and the pride of local communities in it.
- Promote the river as an economic asset to the surrounding communities.
- Preserve, enhance, and restore environmental resources in and along the river.
- Consider stormwater management alternatives.
- Ensure public involvement and coordinate Master Plan development and implementation among jurisdictions.
- Provide a safe environment and a variety of recreational opportunities along the river.
- Ensure safe access to and compatibility between the river and other activity centers.

The LA River Master Plan is currently undergoing a comprehensive update that covers all 51 miles of the river. The update will not be complete prior to this project's Draft EIR being made available to the public.

3.1.3 Environmental Setting

The visual setting for the proposed Project is defined below in terms of (a) key views; (b) existing visual character and quality; (c) scenic resources, scenic vistas, and other visual resources.

3.1.3.1 Key Views

The Project Area includes three segments: West Park, Arts Plaza and River Gateway, and East Park. All Key Observation Points (KOP) have been assessed from the viewpoint of each segment. A KOP identifies key views that document the visual character and quality of the proposed Project in highly representative ways. The analysis identified five such specific views that would be altered to some degree by the

proposed Project. The following KOPs were chosen to represent the clearest display of visual effects of the Project Area at representative locations within its setting (See **Figure 3.1-1,** KOPs):

- KOP 1: Mateo Street and East Sixth Street (West Park) (See **Figure 3.1-2**, KOP 1 [View East from Mateo Street])
- KOP 2: Santa Fe Avenue and Mesquit Street (Arts Plaza and River Gateway) (See **Figure 3.1-3**, KOP 2 [View East from Santa Fe Avenue])
- KOP 3: East Sixth Street and South Mission Road (East Park) (See **Figure 3.1-4**, KOP 3 [View West from Mission Road])
- KOP 4: Anderson Street, between Sixth Street and Jesse Street (East Park) (See **Figure 3.1-5**, KOP 4 [View West from Anderson Street])
- KOP 5: Clarence Street, between Sixth Street and Jesse Street (East Park) (See **Figure 3.1-6**, KOP 5 [View West from Clarence Street] and **Figure 3.1-7**, KOP 5 Towards U.S. 101 Freeway [View East from Clarence Street])

3.1.3.2 Existing Visual Character and Quality

For all five KOPs, the existing visual character is the current construction site for the Viaduct Replacement Project, which is located in a heavily industrialized area of low visual quality, and low vividness and unity.

Figure 3.1-1: KOPs

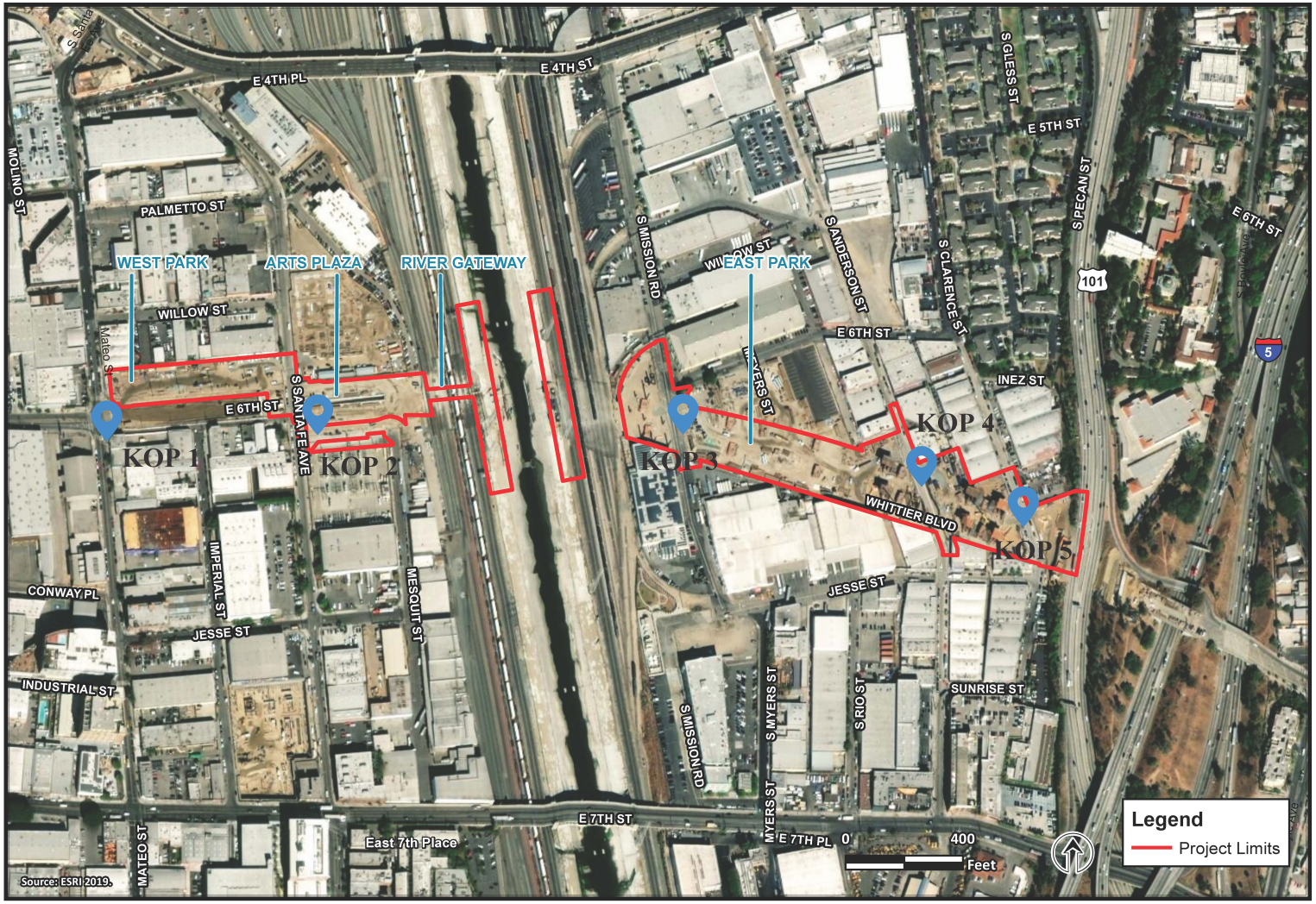

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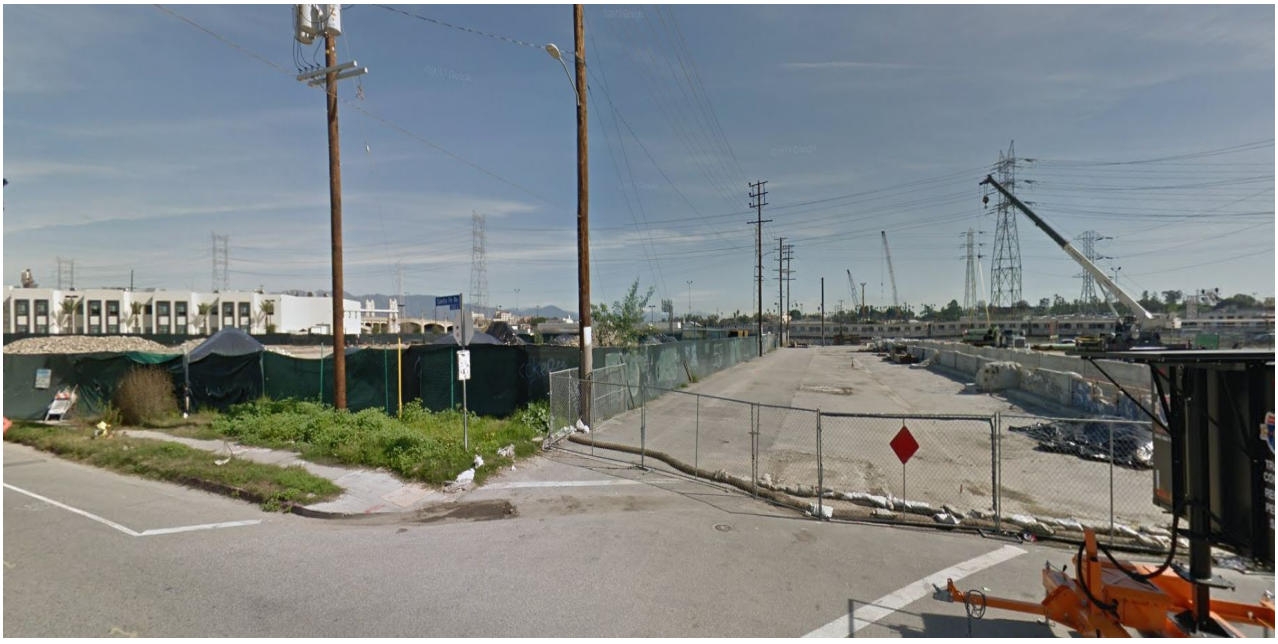
FIGURE 3.1-1. KEY OBSERVATION POINTS
Sixth Street PARC Project

Figure 3.1-2: KOP 1 (View East from Mateo Street)

Source: (GPA Consulting, 2019)

Figure 3.1-3: KOP 2 (View East from Santa Fe Avenue)



Source: (GPA Consulting, 2019)

Figure 3.1-4: KOP 3 (View West from Mission Road)

Source: (GPA Consulting, 2019)

Figure 3.1-5: KOP 4 (View West from Anderson Street)

Source: (GPA Consulting, 2019)

Figure 3.1-6: KOP 5 (View West from Clarence Street)

Source: (GPA Consulting, 2019)

Figure 3.1-7: KOP 5 Towards U.S. 101 Freeway (View East from Clarence Street)

Source: (GPA Consulting, 2019)

West Park

KOP 1: Mateo Street and Sixth Street Bridge

KOP 1 is located at the intersection of Mateo Street and East Sixth Street (at the western extent of the former Viaduct). This industrialized area was the location of the former Viaduct, which was demolished in 2016, and was also occupied by multiple warehouses and commercial storage facilities that were acquired as part of the Viaduct Replacement Project. The existing view from KOP 1 to the east is the construction site for the Viaduct Replacement Project, which includes fencing around an area of bare ground with staged construction equipment and materials (See **Figure 3.1-2**). KOP 1 includes views of neighboring industrial and commercial buildings to the west, north, and south, including stores, warehouses, and a gym.

Arts Plaza and River Gateway

KOP 2: Santa Fe Avenue and Mesquit Street

KOP 2 is located at the intersection of Santa Fe Avenue and Mesquit Street. This industrialized area was the location of the former Viaduct and was also occupied by multiple warehouses and commercial storage facilities that were acquired as part of the Viaduct Replacement Project. The existing view from KOP 2 includes the construction site for the Viaduct Replacement Project to the west and east, which includes fencing around an area of bare ground with staged construction equipment and materials (See **Figure 3.1-3**). To the northeast, a fenced construction site for a Los Angeles County Metropolitan Transportation Authority (Metro) maintenance facility is visible. KOP 2 also includes views of neighboring industrial and commercial buildings to north and south, including a gallery and warehouses. To the southeast, the Los Angeles Department of Water and Power River Switching Station, including power lines and transformers, is visible. There are several railway tracks further east, but their visibility is limited from KOP 2.

East Park

KOP 3: Sixth Street and South Mission Road

KOP 3 is located at the intersection of East Sixth Street and South Mission Road. This area was previously occupied by commercial warehouses and truck yards, as well as an empty space underneath the former Viaduct, which surrounding businesses used to park their vehicles. The existing view from KOP 3 consists of a construction site for the Viaduct Replacement Project to the west, east, and south, which includes fencing around an area of bare ground with staged construction equipment and materials (See **Figure 3.1-4**). Visible vertical elements include power poles and the support structures for the Viaduct Replacement Project. KOP 3 also features views of neighboring industrial and commercial buildings to the north and south, including several warehouses and commercial storage facilities. There are several railway tracks further west, but their visibility is limited from KOP 3.

KOP 4: Anderson Street, between Sixth Street and Jesse Street

KOP 4 is located at Anderson Street between East Sixth Street and Jesse Street. This area was previously occupied by commercial warehouses, industrial facilities, and on-street parking, as well as an empty space underneath the former Viaduct that was used by the surrounding businesses to park their personal vehicles. The existing view from KOP 4 includes the construction site for the Viaduct Replacement

Project, which includes fencing around an area of bare ground with staged construction equipment and materials (See **Figure 3.1-5**). KOP 4 also includes views of neighboring industrial and commercial buildings to the north and south, including several warehouses and commercial storage facilities. The Downtown LA skyline is visible to the west. A berm vegetated with shrubs, grasses, and palm trees adjacent to U.S. 101 is visible to the east.

KOP 5: Clarence Street, between Sixth Street and Jesse Street

KOP 5 is located at Clarence Street between East Sixth Street and Jesse Street (at the eastern extent of the former Viaduct). This area was previously occupied by commercial warehouses, industrial facilities, and on-street parking, as well as an empty space underneath the former Viaduct that was used by the surrounding businesses to park their personal vehicles. The existing view from KOP 5 includes the construction site for the Viaduct Replacement Project to the west and east, which includes fencing around an area of bare ground with staged construction equipment and materials (See **Figure 3.1-6** and **Figure 3.1-7**). KOP 5 also includes views of neighboring industrial and commercial structures to the north and south, including several various warehouses and commercial storage facilities. A berm vegetated with shrubs, grasses, and palm trees adjacent to U.S. 101 is visible to the east.

3.1.3.3 Scenic Resources, Scenic Vistas, and Other Visual Resources

There are no officially designated scenic vistas, resources, or highways that are within the Project Area or visible from the Project Area. Looking west, views of the Downtown LA skyline are visible from several of the KOPs within the Project Area. The Downtown LA skyline could be considered a valued landscape by residents, pedestrians, bicyclists, and motorists of the Central City North and Boyle Heights neighborhoods. The skyline consists of numerous buildings and skyscrapers of visual prominence, including the U.S. Bank Tower, the Wilshire Grand Center, the Wells Fargo Tower, the Aon Center, and the Gas Company Tower, and other structures in Downtown Los Angeles. No officially designated scenic resources, vistas, or corridors have been identified in the Project Area, or are visible from the Project Area.

3.1.4 Environmental Impact Analysis

3.1.4.1 Methodology

Screening criteria pertaining to aesthetics, existing features in the visual setting, effects on scenic resources, and obstruction of views from the *L.A. CEQA Thresholds Guide* (City of Los Angeles, 2006) and State CEQA Statute (Public Resources Code 21000-21189) and Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387) provide the key analytical framework for this section, and guide the process for the proposed Project. This is augmented by the methodology developed by the Federal Highway Administration (FHWA), which has become the industry standard for performing visual impact assessments for local, non-highway related projects. The FHWA methodology calls for analysis of a project's viewshed (i.e., those areas that can be easily seen within a project's setting), using the criteria vividness, intactness, and visual unity captured in key views to assess the level of visual quality present, both before and after a project is implemented. A viewshed comprises all of the surface areas visible from an observer's viewpoint. The viewshed also accounts for the locations of viewers likely to be affected by visual changes brought about by the proposed Project. Within the evaluative framework,

changes to the quality and character of visual resources in the viewshed are assessed with respect to viewer response, as discussed in the following sections.

3.1.4.2 Screening Analysis

Several impacts and corresponding thresholds of significance in the following section were eliminated from further analysis in this EIR. Topics were eliminated if the IS for the proposed Project concluded there would be "No Impact," or if impacts were identified to be "Less Than Significant… and will not be discussed further in the EIR." Therefore, only the topics described in the section below were determined to require further analysis in this EIR. A copy of the Initial Study, which contains the eliminated topics, is provided in **Appendix A**.

3.1.4.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and the *L.A. CEQA Thresholds Guide*, the proposed Project would have a significant impact on Aesthetics if it would:

I(a) Have a substantial adverse effect on a scenic vista.

I(c) 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, conflicts with applicable zoning and other regulations governing scenic quality.

I(d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

> *A.4 Nighttime Illumination.* The determination of significance shall be made on a case-by-case basis, considering the following factors:
>
> - The change in ambient illumination levels as a result of project sources; and
> - The extent to which project lighting would spill off the project site and affect adjacent light sensitive areas.

3.1.4.4 Construction Impacts

I(a): Have a substantial adverse effect on a scenic vista.

There are no officially designated scenic vistas, resources, or highways that are within the Project Area or visible from the Project Area. However, the Downtown LA skyline could be considered a valued viewshed by residents, pedestrians, bicyclists, and motorists of the Central City North and Boyle Heights neighborhoods.

Construction equipment (e.g., grading excavators, scrapers, dozers, tractors, loaders, backhoes, forklifts, and portable generators) would be temporarily present in the Project Area for a period extending up to approximately two years for Phase I and six months for Phase II. Construction activities would be short-term and would not have permanent effects on the Downtown LA skyline. In addition, construction equipment would not introduce new vertical elements because construction equipment is already present in the Project Area as part of the existing construction site for the Viaduct Replacement Project.

Therefore, views to the Downtown LA skyline would not change substantially when compared to existing conditions. Impacts would be less than significant and no mitigation is required.

I(c): 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, conflict with applicable zoning and other regulations governing scenic quality.

The Project Area is in an urbanized area that includes the following land use designations: Limited Industrial (zoned M1), Light Industrial (zoned M2), Heavy Industrial (zoned M3), Open Space (zoned OS) within the LA River, and Public Facilities (zoned PF). In addition, the entire Project Area west of U.S. 101 is zoned RIO. Los Angeles zoning code and regulations would not prohibit any of the proposed construction activities. Staging during construction of the proposed Project would be coordinated with the construction of the Viaduct Replacement Project; therefore, the proposed Project would not require the additional use or acquisition of public space for equipment and vehicles.

Short-term construction impacts to the existing scenic quality of the Project Site and its surrounding area would be temporary in nature and all construction equipment and machinery would be removed upon completion of the project. The construction area would be fenced to obscure views of construction activities, materials, and staged equipment. In addition, the Project Area currently contains equipment and machinery that are being used for the construction of the Viaduct Replacement Project. Therefore, construction of the proposed Project would not result in substantial visual changes that would conflict with applicable zoning and other regulations governing scenic quality. Impacts would be less than significant, and no mitigation is required.

Construction of the proposed Project would require the use of construction vehicles that would include cranes and drill rig trucks, among other vehicles and equipment, that may exceed 60 feet in height above ground elevation. However, shading from construction vehicles would be temporary due to the constant mobility of the vehicles throughout the Project Site. Therefore, construction equipment and vehicles related to the proposed Project would not result in a significant impact on shading in the project area, during the construction of the proposed Project. Impacts would be less than significant, and no mitigation is required.

I(d): Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

The proposed Project is in an urban area with many sources of ambient illumination, including light emitted from commercial and industrial properties and lampposts lining the streets surrounding the construction site, as well as from the headlights of vehicles traveling through the Project Area. The nearest sensitive receptors are residences near the intersection of South Clarence Street and Inez Street, located approximately 0.6 miles north of the nearest construction activities. The areas directly surrounding the proposed park are primarily vacant or occupied by industrial or commercial properties that would not be sensitive to spillover light. Therefore, impacts would be less than significant, and no mitigation is required.

Construction of the proposed Project would not create a substantial source of light or glare that would adversely affect daytime views in the area; however, nighttime views may be affected. During

construction of the proposed Project, perimeter lighting may be required on the construction site for security and safety purposes during nighttime. If nighttime lighting at the construction site is required, lighting would be directed downward, on-site, and away from surrounding land uses. Spillover light would be minimized to the greatest extent feasible so that it would not interfere with functions of adjacent properties including vision, sleep, privacy, and general enjoyment of the natural nighttime condition. Because the proposed Project would comply with the provisions in the City's Municipal Code, including; LAMC Chapter 1, Article 2, Sec. 12.21A5(k); LAMC Chapter 1, Article 7, Sec. 17.08C; and LAMC Chapter 9, Article 3, Section 93.0117, it is not expected to result in new sources of substantial light or glare.

3.1.4.5 Operational Impacts

I(a): Have a substantial adverse effect on a scenic vista.

There are no officially designated scenic vistas, resources, or highways that are within the Project Area or visible from the Project Area. However, the Downtown LA skyline could be considered a valued viewshed by residents, pedestrians, bicyclists, and motorists of the Central City North and Boyle Heights neighborhoods.

The proposed Project would not introduce vertical elements tall enough to obstruct views of the Downtown Los Angeles skyline. Approximately 5.8 acres of the 13-acres PARC would be under the Viaduct. The proposed Project would include design components that would occur primarily at ground level or underneath the Viaduct, including the addition of pedestrian walking trails, bike paths, sports fields and courts, performance lawns and stages, public seating areas, open grass areas and landscaping, and pet play areas. The addition of vertical structures, such as large vegetation, trees, public art pieces, and general site and sports field lighting would also be included; however, none of the proposed elements would have the potential to block any scenic vistas. The art pieces would be located within the West Park and potentially East Park and would be up to 30 feet tall. The art pieces would not be directly under the Viaduct and could therefore cause shade within the boundaries of the parks. However, the shade would be limited to the immediate vicinity of the art pieces and would not affect adjacent properties. In addition, the art pieces would not be tall enough to block views of the DTLA skyline, which would still be visible from other viewpoints. The skyline would continue to be visible to all motorists, residents, visitors, and pedestrians. Therefore, impacts would be less than significant, and no mitigation is required.

I(c): 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, conflict with applicable zoning and other regulations governing scenic quality.

As discussed in Section 3.1.4.4, the Project Area is in an urbanized area that includes the following land use designations: Limited Industrial (zoned M1), Light Industrial (zoned M2), Heavy Industrial (zoned M3), Open Space (zoned OS) within the LA River, and Public Facilities (zoned PF). In addition, the entire Project Area west of U.S. 101 is zoned RIO. Once the necessary approvals are obtained, the proposed Project would be consistent with the zoning code and regulations governing the Project Area (see Section 3.10, Land Use and Planning, for additional information). The City's Bureau of Engineering (BOE) would work with the Los Angeles Department of City Planning to ensure that the proposed Project is consistent with any future zoning changes within the Project Area. The proposed Project was designed to be

consistent with the design guidelines established for the RIO District, which include the Los Angeles River Revitalization Master Plan and LA River Design Guidebook. In addition, lighting would be consistent with the regulations outlined in the LAMC and the Bureau of Street Lighting Design Standards.

The proposed Project would substantially improve the scenic quality of the Project Site with the addition of the West Park, Arts Plaza and River Gateway, and East Park in the neighborhoods of Central City North and Boyle Heights. **Figure 3.1-8** through **Figure 3.1-15** (see pages 3.1-21 through 3.1-24) demonstrate simulated operational views from KOPs within the Project Area.

Key components of the proposed Project would include sports fields, open grass areas, multipurpose sports courts, pedestrian and bicycle paths, performance stages, pet play areas, art pieces and associated interpretive exhibits. These proposed Project elements would result in a substantial aesthetic improvement from the existing construction site.

The proposed Project would increase the number of trees and provide new vegetation in the form of gardens, meadows, and lawns. The proposed Project would also include reinforced concrete planted terraces on the west and east banks of the LA River. These new elements would provide shade throughout the Project Site and would add a greater variation in natural texture, color, and landscape to the area, thereby improving the scenic quality of the area. Landscaping would be consistent with the design guidelines established for the RIO District.

When facing west, views of the Downtown Los Angeles skyline would continue to be visible from the Project Area. The proposed Project, with its series of natural landscaping, open space, and social and recreational areas, would be more vivid in appearance than the existing construction site and the industrialized portions of Central City North and Boyle Heights within the Project Area. The effects on the visual intactness and unity of the view would generally be positive and are expected to improve the scenic quality of the area.

Residents, pedestrians, local business employees, and commuters within and in proximity to the Project Area would have clear views of the new park and would most likely notice changes to the visual environment caused by the proposed Project from all of the KOPs. However, awareness of the changed area would diminish over time as the new facility becomes a familiar component within the overall viewshed. Therefore, the scenic quality of the Project Area is expected to improve as a result of the proposed Project. As such, the proposed Project would not conflict with applicable zoning and other regulations governing scenic quality. Therefore, impacts would be less than significant, and no mitigation is required.

Additionally, the proposed Project would not include any light-blocking structures that would exceed 60 feet in height above the ground elevation. Therefore, structures to the proposed Project would not result in a significant impact on shading in the project area, during operation of the proposed Project. Impacts would be less than significant, and no mitigation is required.

I(d): Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

The proposed Project is in an urban area with many sources of ambient illumination, including light emitted from commercial and industrial properties and lampposts lining the streets surrounding the construction site, as well as from the headlights of vehicles traveling through the Project Area. Because

the proposed Project is in an industrial area, there are few receptors in the Project Area, such as residences, that would be sensitive to spillover light. The nearest sensitive receptors are residences near the intersection of South Clarence Street and Inez Street, located approximately 0.6 mile north of the nearest lighting features. The areas directly surrounding the proposed park are primarily vacant or occupied by industrial or commercial properties that would not be sensitive to spillover light.

The proposed Project would introduce new lighting along the sidewalks, playgrounds, performance stages, and sports areas to increase public safety and visibility. Areas within the proposed Project Site that demonstrate a high need for nighttime lighting include the LA River Access Tunnel, restrooms, and the sports fields and performance areas.

Lighting for security would be installed throughout the Project Site to protect people and property and illuminated in accordance with the Illuminating Engineering Society (IES) standards, *IES RP-33-14 Lighting for Exterior Environments* and IES G-1-03 *Security Lighting for People, Property and Public Spaces*, as updated by IES G-1-16 *Guide for Security Lighting for People, Property and Critical Infrastructure*. Luminaires with shielded optics would be used, and the proposed Project would be designed to infill lighting in areas where architectural and bridge elements could impede the flow of light. Security lighting would not adversely affect daytime or nighttime views in the area.

The sports fields and performance areas would feature switchable and dimmable lights to reduce lighting when these facilities are not in use. Lighting would be directed on-site, and spillover light would be minimized to the greatest extent feasible so that it would not interfere with functions of adjacent properties including vision, sleep, privacy, and general enjoyment of the natural nighttime condition. Light levels would be gradually reduced when moving away from the high illuminance sports fields. In addition, the use of outdoor lighting for recreational activities would be limited to the proposed operating hours, between 5:00 a.m. and 10:30 p.m. in accordance with LAMC Sec. 63.44. In addition, the proposed Project would not include surfaces that would produce glare. Therefore, the proposed Project would not create new sources of substantial light or glare that would adversely affect daytime or nighttime views in the area.

The new walkway lighting would be compliant with all regulations set forth by the City's Bureau of Street Lighting *Design Standards and Guidelines* to ensure that the area receives lighting that meets national illumination standards for vehicular and pedestrian traffic, does not emit light pollution, and produces little glare (Bureau of Street Lighting, 2007). In addition, the lighting for the proposed sports fields and courts would operate in compliance with Los Angeles City Recreation and Parks (RAP) illuminance level standards for outdoor sports and recreational facilities. RAP illuminance level standards are measured in horizontal foot candles, which refer to the amount of light being received on a horizontal surface. Los Angeles City RAP standards for the proposed Project would include illumination levels of 30-foot candles average over the entire area of basketball courts and 30-foot candles average over soccer fields. With adherence to the City's *Design Standards and Guidelines*, the City's RAP illuminance standard levels, and the provisions in the City's Municipal Code, including LAMC Chapter 1, Article 2, Sec. 12.21A5(k); LAMC Chapter 1, Article 7, Sec. 17.08C; and LAMC Chapter 9, Article 3, Section 93.0117, the proposed Project would not result in substantial light or glare effects. Therefore, impacts would be less than significant, and no mitigation is required.

Figure 3.1-8: KOP 1 (West Park – View West from Sloped Walkway)

Source: (Hargreaves Associates, 2019)

Figure 3.1-9: KOP 1 (West Park – View East from Mateo Street)

Source: (Hargreaves Associates, 2019)

Figure 3.1-10: KOP 2 (Art Plaza – View East from Berm)

Source: (Hargreaves Associates, 2019)

Figure 3.1-11: KOP 2 (Arts Plaza – View West from Upper Walkway)

Source: (Hargreaves Associates, 2019)

Figure 3.1-12: KOP 3 (East Park –View West towards East Ramp)

Source: (Hargreaves Associates, 2019)

Figure 3.1-13: KOP 3 (East Park – View West towards Soccer Fields)

Source: (Hargreaves Associates, 2019)

Figure 3.1-14: KOP 4 (East Park – View East towards Children's Play and Plaza)

Source: (Hargreaves Associates, 2019)

Figure 3.1-15: KOP 5 (East Park – View East towards Dog Park)

Source: (Hargreaves Associates, 2019)

3.1.5 Best Management Practices

BMP-AES-1: Construction Lighting

If nighttime lighting at the construction site is required, lighting shall be directed downward, on-site, and away from surrounding land uses.

BMP-AES-2: Construction Staging and Construction Staging Area

Construction staging shall be coordinated with the construction of the Viaduct Replacement Project; therefore, additional use or acquisition of public space for equipment and vehicles will not be required. The construction area shall be fenced to obscure views of construction activities, materials, and staged equipment.

BMP-AES-3: Operational Lighting

Outdoor lighting for recreational activities shall be limited to the proposed operating hours.

BMP-AES-4: Regulatory Requirements for Lighting

- Proposed Project illumination shall comply with the provisions in the City's Municipal Code, including LAMC Chapter 1, Article 2, Sec. 12.21A5(k); LAMC Chapter 1, Article 7, Sec. 17.08C; and LAMC Chapter 9, Article 3, Section 93.0117.
- The new walkway lighting shall be compliant with all regulations set forth by the City's Bureau of Street Lighting Design Standards and Guidelines to ensure that the area receives lighting that meets national illumination standards for vehicular and pedestrian traffic, does not emit light pollution, and produces little glare.
- Lighting for sports fields and courts shall operate in compliance with Los Angeles City Recreation and Parks (RAP) illuminance level standards for outdoor sports and recreational facilities.
- Lighting for security shall be illuminated in accordance with the Illuminating Engineering Society (IES) standards, IES RP-33-14 *Lighting for Exterior Environments* and IES G-1-03 *Security Lighting for People, Property and Public Spaces*, as updated by IES G-1-16 *Guide for Security Lighting for People, Property and Critical Infrastructure*.

3.1.6 Mitigation Measures

Impacts related to Aesthetics would be less than significant; therefore, no mitigation measures are required.

3.1.7 Significant Unavoidable Adverse Impacts

There are no significant unavoidable adverse impacts on Aesthetics resulting from construction and operation of the proposed Project.

3.1.8 Cumulative Impacts

The cumulative study area for Aesthetics impacts includes the locations that have clear sightlines to the proposed Project. Of the projects included in **Table 1-1**, the only projects with clear sightlines to the

proposed Project are the Viaduct Replacement Project, 670 Mesquite Project, and Metro Arts District Rail Yard. The proposed Project is designed to complement the aesthetics of the Viaduct Replacement Project. The 670 Mesquite Project design approach is intended to complement the industrial character of the Arts District. The proposed building materials would include concrete, steel, and glass, reflecting materials prevalent in the neighborhood. The Metro Art District Rail Yard would involve the construction of a new Metro line that would include visual changes consistent with the existing setting and surrounding environment. All development projects would be evaluated on whether they are consistent with the City's design guidelines, policies, and development standards. Therefore, these projects are not expected to adversely affect visual character and quality or result in effects that are potentially cumulatively significant.

The proposed Project would be designed in compliance with the City's design guidelines, policies, and development standards and would result in less than significant impacts related to Aesthetics. Therefore, the proposed Project is not expected to contribute to significant cumulative impacts related to Aesthetics.

3.2 Air Quality

This section describes the affected environment and regulatory setting for Air Quality related to the Project Area. In addition, this section describes the potential impacts related to Air Quality that would result from the implementation of the proposed Project. As noted in the analysis below, impacts associated with Air Quality during construction and operation of the proposed Project would be less than significant with the incorporation of mitigation measures.

The information in this section is based on the *Air Quality and Greenhouse Gas Impact Assessment* (AMBIENT Air Quality & Noise Consulting, 2019) prepared for the proposed Project. Air quality and greenhouse gas emissions were generated for an opening year of 2021 (AMBIENT Air Quality & Noise Consulting, 2019). Due to project delays, it is now anticipated that the park will open in 2024. There is not anticipated to be a substantial difference in projected emissions from 2021 to 2024 and emissions in 2024 may be slightly lower due to continual improvement in vehicle and equipment emission standards.

3.2.1 Regulatory Setting

A review of the various federal, state, regional, and local government regulatory requirements was conducted to identify regulations that relate to Air Quality. This section summarizes the various regulatory requirements that are relevant to the proposed Project.

3.2.1.1 Applicable Regulations

Federal

U.S. Environmental Protection Agency

At the federal level, the U.S. Environmental Protection Agency (U.S. EPA) oversees the implementation of national air quality programs by state, local, and tribal governments (U.S. Environmental Protection Agency, 2018c). The U.S. EPA's air quality mandates are drawn primarily from the Federal Clean Air Act (FCAA), which was signed into law in 1970. Congress substantially amended the FCAA in 1977 and again in 1990.

Federal Clean Air Act

For the protection of public health and welfare, the FCAA requires that the U.S. EPA establish National Ambient Air Quality Standards (NAAQS) for various pollutants and set deadlines for their attainment. These pollutants are referred to as "criteria" pollutants because the U.S. EPA publishes criteria documents to justify the choice of standards. These standards define the maximum amount of an air pollutant that can be present in ambient air. An ambient air quality standard is generally specified as a concentration averaged over a specific time period, such as one hour, eight hours, 24 hours, or one year. The different averaging times and concentrations are meant to protect against different exposure effects. Standards established for the protection of human health are referred to as primary standards; whereas, standards established for the prevention of environmental and property damage are called secondary standards. The FCAA allows states to adopt additional or more health-protective standards.

Two types of NAAQS have been established: (1) primary standards that protect public health, and (2) secondary standards that protect public welfare from non-health-related adverse effects, such as

visibility restrictions. NAAQS were established for the following criteria pollutants: lead (Pb), ozone (O_3), particulate matter (PM_{10}), carbon monoxide (CO), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2), which are summarized in **Table 3.2-1**.

Table 3.2-1: Summary of Ambient Air Quality Standards and Attainment Designations

Pollutant	Averaging Time	CAAQS		NAAQS	
		Concentration	Attainment Status	Primary	Attainment Status
Ozone (O_3)	1-hour	0.09 ppm	Non-Attainment	–	Non-Attainment (Extreme)
	8-hour	0.070 ppm		0.070 ppm	
Particulate Matter (PM_{10})	AAM	20 µg/m^3	Non-Attainment	–	Attainment/ Maintenance
	24-hour	50 µg/m^3		150 µg/m^3	
Fine Particulate Matter ($PM_{2.5}$)	AAM	12 µg/m^3	Non-Attainment	12 µg/m^3	Non-Attainment (Serious)
	24-hour	No Standard		35 µg/m^3	
Carbon Monoxide (CO)	1-hour	20 ppm	Attainment	35 ppm	Attainment/ Maintenance
	8-hour	9 ppm		9 ppm	
Nitrogen Dioxide (NO_2)	AAM	0.030 ppm	Attainment	0.053 ppm	Unclassified/ Attainment
	1-hour	0.18 ppm		0.100 ppb[b]	
Sulfur Dioxide (SO_2)	AAM	–	Attainment	0.03 ppm	Unclassified/ Attainment
	24-hour	0.04 ppm		0.14 ppm	
	3-hour	–		--	
	1-hour	0.25 ppm		75 ppb	
Lead (Pb)	30-day Average	1.5 µg/m^3	Attainment	–	Non-Attainment (Partial)
	Calendar Quarter	–		1.5 µg/m^3	
	Rolling 3-Month Average	–		0.15 µg/m^3	
Sulfates	24-hour	25 µg/m^3	Attainment	No Federal Standards	

Pollutant	Averaging Time	CAAQS		NAAQS	
		Concentration	Attainment Status	Primary	Attainment Status
Hydrogen Sulfide	1-hour	0.03 ppm (42 µg/m^3)	Unclassified	No Federal Standards	
Vinyl Chloride	24-hour	0.01 ppm (26 µg/m3)	Attainment	No Federal Standards	
Visibility-Reducing Particle Matter	8-hour	Extinction coefficient: 0.23/kilometer-visibility of 10 miles or more (0.07-30 miles or more for Lake Tahoe) due to particles when the relative humidity is less than 70%.	Unclassified	No Federal Standards	

CAAQS = California Ambient Air Quality Standards; NAAQS = National Ambient Air Quality Standards; AAM = annual arithmetic mean; ppm = parts per million; ppb = parts per billion; µg/m^3 = microgram per cubic meter
Source: (South Coast Air Quality Management District, 2016)

The FCAA also requires each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The FCAA Amendments of 1990 added requirements for states with non-attainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The U.S. EPA must review all SIPs to determine whether they conform to the mandates of the FCAA and the amendments thereof and to determine whether implementing them will achieve air quality goals. If the U.S. EPA determines a SIP to be inadequate, a Federal Implementation Plan that imposes additional control measures may be prepared for the non-attainment area. Failure to submit an approvable SIP or to implement the plan within the mandated time frame may cause sanctions to be applied to transportation funding and stationary air pollution sources in the air basin.

Toxic Substances Control Act

The Toxic Substances Control Act (TSCA) first authorized the U.S. EPA to regulate asbestos in schools and Public and Commercial buildings under Title II of the law, which is also known as the Asbestos Hazard Emergency Response Act (AHERA). AHERA requires Local Education Agencies to inspect their schools for asbestos-containing materials (ACM) and to prepare management plans to reduce the asbestos

hazard. The TSCA also established a program for the training and accreditation of individuals performing certain types of asbestos work.

National Emission Standards for Hazardous Air Pollutants

Pursuant to the FCAA, the U.S. EPA established the National Emission Standards for Hazardous Air Pollutants (NESHAP). NESHAP are technology-based source-specific regulations that limit allowable emissions of hazardous air pollutants and include asbestos-containing building material. NESHAPs pertain to the inspection, notification, handling, and disposal of asbestos-containing building material associated with the demolition and renovation of structures.

State

California Air Resources Board

The California Air Resources Board (CARB) is the agency responsible for coordination and oversight of State and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA) of 1988. Other CARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control districts and air quality management districts); establishing the California Ambient Air Quality Standards (CAAQS), which in many cases are more stringent than the NAAQS; and setting emissions standards for new motor vehicles. The CAAQS are summarized in **Table 3.2-1**. The emission standards established for motor vehicles differ depending on various factors including the model year, and the type of vehicle, fuel and engine used.

California Clean Air Act

The CCAA requires that all air districts in the State endeavor to achieve and maintain CAAQS for O_3, CO, SO_2, and NO_2 by the earliest practical date. The CCAA specifies that districts focus particular attention on reducing the emissions from transportation and area-wide emission sources, and the act provides districts with authority to regulate indirect sources. Each district plan is required to either (1) achieve a five percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each non-attainment pollutant or its precursors, or (2) to provide for implementation of all feasible measures to reduce emissions. Any planning effort for air quality attainment would thus need to consider both State and Federal planning requirements.

Assembly Bills 1807 & 2588 – Toxic Air Contaminants

Within California, Toxic Air Contaminants (TAC) are regulated primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics Hot Spots Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB designates a substance as a TAC. Existing sources of TACs that are subject to the Air Toxics Hot Spots Information and Assessment Act are required to: (1) prepare a toxic emissions inventory; (2) prepare a risk assessment if emissions are significant; (3) notify the public of significant risk levels; and (4) prepare and implement risk reduction measures.

In-Use Off-Road Diesel Vehicle Regulation

On July 26, 2007, the CARB adopted the *In-Use Off-Road Diesel Fueled Fleets Regulation* to reduce diesel-exhaust particulate matter (DPM) and oxides of nitrogen (NO_x) emissions from in-use (existing) off-road

heavy-duty diesel vehicles in California (California Air Resources Board, 2019a). The regulation applies to self-propelled diesel-fueled vehicles that cannot be registered and licensed to drive on-road, as well as two-engine vehicles that drive on road, with the limited exception of two-engine sweepers. Examples include loaders, crawler tractors, skid steers, backhoes, forklifts, airport ground support equipment, water well drilling rigs, and two-engine cranes. Such vehicles are used in construction, mining, and industrial operations. The regulation does not apply to stationary equipment or portable equipment such as generators. The off-road vehicle regulation establishes emissions performance requirements, establishes reporting, disclosure, and labeling requirements for off-road vehicles, and limits unnecessary idling (California Air Resources Board, 2016).

Regional

South Coast Air Quality Management District

Because Southern California has one of the worst air quality problems in the Nation, the South Coast Air Quality Management District (SCAQMD) was created by the 1977 Lewis Air Quality Management Act (South Coast Air Quality Management District, 2005). Four county air pollution control agencies were merged into one regional district to better address the issue of improving air quality in Southern California (South Coast Air Quality Management District, 2005). Under the Lewis-Presley Air Quality Management Act, which revised the Lewis Air Quality Management Act, the SCAQMD is the agency principally responsible for comprehensive air pollution control in the South Coast Air Basin (SCAB). SCAB includes portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange County. Specifically, the 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 SCAQMD. Programs developed include air quality rules and regulations that regulate stationary source emissions, including area and point sources and certain mobile source emissions. The SCAQMD is also responsible for establishing permitting requirements and issuing permits for stationary sources and ensuring that new, modified, or relocated stationary sources do not create net emissions increases. The SCAQMD enforces air quality rules and regulations through a variety of means, including inspections, educational and training programs, and fines.

Specific SCAQMD rules applicable to the construction of the proposed Project may include, but are not limited to:

- *Rule 401 – Visible Emissions*: A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines.
- *Rule 402 – Nuisance*: A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to 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. The provisions of this rule do not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

- *Rule 403 – Fugitive Dust*: This rule is intended to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 applies to any activity or man-made condition capable of generating fugitive dust.
- *Rule 1113 – Architectural Coatings*: No person shall apply or solicit the application of any architectural coating within the SCAQMD, with a volatile organic compound (VOC) content in excess of the values specified in a table incorporated in the Rule.
- *Rule 1166 – Volatile Organic Compound Emissions from Decontamination of Soil*. The rule sets requirements to control the emission of VOCs during the excavating, grading, handling, and/or treating of VOC-contaminated soil. Prior to these activities, an approved mitigation plan must be obtained from SCAQMD.
- *Rule 1466 – Control of Particulate Emissions from Soils with Toxic Air Contaminants*. This rule requires notification, monitoring, and record keeping for earth-moving activities of soil with applicable toxic air contaminant(s) of greater than 50 cubic yards at a site that has been designated and notified by the following: (A) U.S. EPA as a Superfund National Priorities List site; (B) DTSC as a Brownfield or Cleanup Program site; (C) the State Water Resources Control Board or RWQCB as a Site Cleanup Program site; (D) a county, local, or state regulatory agency as a Hazardous Material Release site, as defined in California Health and Safety Code Section 25260; or (E) the Executive Officer pursuant to subdivision (i).

The SCAQMD is also the lead agency in charge of developing the Air Quality Management Plan (AQMP), with input from the Southern California Association of Governments (SCAG) and CARB. The AQMP is a comprehensive plan that includes control strategies for stationary and area sources, as well as for on-road and off-road mobile sources. SCAG has the primary responsibility for providing future growth projections and the development and implementation of transportation control measures. CARB, in coordination with federal agencies, provides the control element for mobile sources.

Southern California Association of Governments

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. Under federal law, SCAG is designated as a Metropolitan Planning Organization (MPO) and under State law as a Regional Transportation Planning Agency and a Council of Governments.

On September 3, 2020, SCAG adopted Connect SoCal: The 2020-2045 RTP/SCS (Southern California Association of Governments, 2020). The RTP is a long-range transportation plan that provides a vision for regional transportation investments over a period of 20 years or more. The SCS demonstrates the integration of land use, transportation strategies, and transportation investments within the Plan. SCAG is also responsible under the FCAA for determining federal air quality conformity of projects, plans, and programs within the SCAQMD.

The 2020-2045 RTP/SCS would also help to reduce vehicle delay and vehicle miles traveled (VMT) within the region. On a per capita basis, vehicle delay would be reduced by roughly 26 percent and heavy-duty truck delay on highways 24 percent. VMT per capita would be reduced by five percent and vehicle hours

traveled (VHT) would be reduced by approximately nine percent per capita (Southern California Association of Governments, 2020).

Air Quality Management Plan

The 2016 AQMP was adopted by the SCAQMD Governing Board on March 3, 2017 (South Coast Air Quality Management District, 2017). The 2016 AQMP seeks to achieve multiple goals in partnership with other entities to promote reductions of criteria air pollutants, greenhouse gases, and toxic air contaminants. The AQMP also promotes increased efficiencies in energy use, transportation, and goods movement. The 2016 AQMP also includes transportation control measures developed by SCAG from the 2016-2040 RTP/SCS. The 2016 AQMP includes the integrated strategies and measures necessary to demonstrate attainment of the 1-hr and 8-hr ozone NAAQS as well as the latest 24-hr and annual $PM_{2.5}$ standards.

Local

City of Los Angeles General Plan

The City has adopted the Air Quality Element of the General Plan to aid in attaining State and Federal ambient air quality standards at the earliest feasible date, while still maintaining economic growth and improving quality of life (City of Los Angeles, 1992). The Air Quality Element establishes the following goals that are intended to improve air quality throughout the City:

- Good air quality and mobility in an environment of continued population growth and healthy economic structure;
- Less reliance on single-occupant vehicles with fewer commute and non-work trips;
- Efficient management of transportation facilities and system infrastructure using cost- effective system management and innovative demand-management techniques;
- Minimal impact of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation, and air quality;
- Energy efficiency through land use and transportation planning, the use of renewable resources and less-polluting fuels, and the implementation of conservation measures including passive methods such as site orientation and tree planting; and
- Citizen awareness of the linkages between personal behavior and air pollution, and participation in efforts to reduce air pollution.

3.2.1.2 Regulatory Attainment Designations

Under the CCAA, the CARB is required to designate areas of the State as attainment, nonattainment-transitional, nonattainment, or unclassified with respect to applicable standards. An "attainment" designation for an area signifies that pollutant concentrations did not violate the applicable standard in that area. A "nonattainment" designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. Depending on the frequency and severity of pollutants exceeding applicable standards, the nonattainment designation can be further classified as serious nonattainment, severe nonattainment, or extreme nonattainment, with extreme nonattainment being the most severe of the

classifications. An "unclassified" designation signifies that the data does not support either an attainment or nonattainment designation. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category. In accordance with the FCAA, areas are designated attainment, nonattainment, or maintenance.

The U.S. EPA designates areas for ozone, CO, and NO_2 as "does not meet the primary standards," "cannot be classified," or "better than national standards." For SO_2, areas are designated as "does not meet the primary standards," "does not meet the secondary standards," "cannot be classified," or "better than national standards." However, the CARB terminology of attainment, nonattainment, and unclassified is more frequently used. The U.S. EPA uses the same sub-categories for nonattainment status: serious, severe, and extreme, as well as moderate and marginal. In 1991, U.S. EPA assigned new nonattainment designations to areas that had previously been classified as Group I, II, or III for PM_{10} based on the likelihood that they would violate national PM_{10} standards. All other areas are designated "unclassified."

The state and national attainment status designations for the SCAB are summarized in **Table 3.2-1**. The SCAB is currently designated as a nonattainment area with respect to the State ozone, PM_{10}, and $PM_{2.5}$ standards, as well as the national 8-hour ozone and $PM_{2.5}$ standards. In addition, based on monitoring data obtained near a lead acid battery reclamation facility, Los Angeles County is currently designated nonattainment for the Federal lead standard (South Coast Air Quality Management District, 2012). With the exception of Los Angeles County, the remainder of the SCAB is designated attainment for the lead standards. The SCAB is designated attainment or unclassified for the remaining State and Federal standards.

3.2.1.3 Relevant Air Pollutants

Criteria Air Pollutants

The following provides a summary discussion of the criteria air pollutants of primary concern:

Ozone (O_3)

O_3 is a reactive gas consisting of three atoms of oxygen. In the troposphere, it is a product of the photochemical process involving the sun's energy. It is a secondary pollutant that is formed when NO_x and VOCs, also referred to as reactive organic gases (ROG) react in the presence of sunlight. O_3 is a major component of smog. In the stratosphere, O_3 exists naturally and shields Earth from harmful incoming ultraviolet radiation.

High concentrations of ground level O_3 can adversely affect the human respiratory system and aggravate lung diseases (U.S. Environmental Protection Agency, 2018b). O_3 can also have negative impacts on ecosystems, including the loss of species diversity, changes to habitat quality, and changes to water and nutrient cycles (U.S. Environmental Protection Agency, 2017a).

Reactive Organic Gas

ROG is a reactive chemical gas, composed of hydrocarbon compounds that may contribute to the formation of smog by their involvement in atmospheric chemical reactions. No separate health standards exist for ROG as a group. Because some compounds that make up ROG are also toxic, like the carcinogen benzene, they are often evaluated as part of a toxic risk assessment. Total Organic Gases (TOGs) includes

all of the ROGs, in addition to low reactivity organic compounds like methane and acetone. ROGs and VOC are subsets of TOG.

VOCs are hydrocarbon compounds that exist in the ambient air. VOCs contribute to the formation of smog and may also have short- and long-term adverse health effects (U.S. Environmental Protection Agency, 2017d; U.S. Environmental Protection Agency, 2017e). VOC emissions are a major precursor to the formation of ozone. VOCs may also be odorous. VOCs are found in gasoline, alcohol, and in some paints.

Oxides of Nitrogen

NO_x are a family of gaseous nitrogen compounds and is a precursor to the formation of ozone and particulate matter. The major component of NO_x, NO_2, is a reddish-brown gas that is toxic at high concentrations. NO_x results primarily from the combustion of fossil fuels under high temperature and pressure. On-road and off-road motor vehicles and fuel combustion are the major sources of this air pollutant.

Particulate Matter

Particulate Matter (PM), also known as particle pollution, is a complex mixture of extremely small particles and liquid droplets. Particle pollution is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The size of particles is causally linked to the potential for causing health problems. U.S. EPA is concerned about particles that are 10 micrometers in diameter or smaller because those are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects (U.S. Environmental Protection Agency, 2018a). U.S. EPA groups particle pollution into three categories based on their size and where they are deposited:

- "Inhalable coarse particles ($PM_{2.5}$ - PM_{10})," such as those found near roadways and dusty industries, are between 2.5 and 10 micrometers in diameter. $PM_{2.5}$ - PM_{10} is deposited in the thoracic region of the lungs.
- "Fine particles ($PM_{2.5}$)," such as those found in smoke and haze, are 2.5 micrometers in diameter and smaller. These particles can be directly emitted from sources such as forest fires, or they can form when gases emitted from power plants, industries and automobiles react in the air. They penetrate deeply into the thoracic and alveolar regions of the lungs.
- "Ultrafine particles (UFP)," are very small particles less than 0.1 micrometers in diameter largely resulting from the combustion of fossils fuels, meat, wood, and other hydrocarbons. While UFP mass is a small portion of $PM_{2.5}$, its high surface area, deep lung penetration, and transfer into the bloodstream can result in disproportionate health impacts relative to their mass. (U.S. Environmental Protection Agency, 2017c)

PM_{10}, $PM_{2.5}$, and UFP include primary pollutants (emitted directly to the atmosphere) as well as secondary pollutants (formed in the atmosphere by chemical reactions among precursors). Generally speaking, $PM_{2.5}$ and UFP are emitted by combustion sources like vehicles, power generation, industrial processes, and wood burning, while PM_{10} sources include these same sources plus roads and farming activities. Fugitive windblown dust and other area sources also represent a source of airborne dust.

Numerous scientific studies have linked both long- and short-term particle pollution exposures to a variety of health problems. Long-term exposures, such as those experienced by people living for many years in areas with high particle levels, have been associated with problems such as reduced lung function and the development of chronic bronchitis, and even premature death. Short-term exposures to particles (hours or days) can aggravate lung disease, causing asthma attacks and also acute (short-term) bronchitis, and may also increase susceptibility to respiratory infections. In people with heart disease, short-term exposures have been linked to heart attacks and arrhythmias. Healthy children and adults have not been reported to suffer serious effects from short term exposures, although they may experience temporary minor irritation when particle levels are elevated. (U.S. Environmental Protection Agency, 2017b)

Carbon Monoxide

Carbon monoxide (CO) is an odorless, colorless gas that is highly toxic. It is formed by the incomplete combustion of fuels and is emitted directly into the air (unlike O_3). The main source of CO is on-road motor vehicles. Other CO sources include other mobile sources, miscellaneous processes, and fuel combustion from stationary sources. Because of the local nature of CO problems, CARB and U.S. EPA designate urban areas as CO nonattainment areas instead of the entire basin as with ozone and PM_{10}. Motor vehicles are by far the largest source of CO emissions. Emissions from motor vehicles have been declining since the mid-1970s, despite increases in vehicle miles traveled, with the introduction of new automotive emission controls and fleet turnover (California Air Resources Board, 2005b).

Sulfur Dioxide

Sulfur dioxide (SO_2), the most common sulfur oxide (SO_x), is a colorless, irritating gas with a "rotten egg" smell formed primarily by the combustion of sulfur-containing fossil fuels. Like airborne NO_x, suspended SO_x particles contribute to poor visibility. These SO_x particles can also combine with other pollutants to form $PM_{2.5}$. The prevalence of low-sulfur fuel use has minimized problems from this pollutant.

Lead

Lead (Pb) is a metal that is a natural constituent of air, water, and the biosphere. Lead is neither created nor destroyed in the environment, so it essentially persists forever. The health effects of lead poisoning include loss of appetite, weakness, and miscarriage (Centers for Disease Control and Prevention, 2018). Lead can also cause lesions of the neuromuscular system, circulatory system, brain, and gastrointestinal tract. Gasoline-powered automobile engines were a major source of airborne lead through the use of leaded fuels. The use of leaded fuel has been mostly phased out, with the result that ambient concentrations of lead have dropped dramatically (U.S. Environmental Protection Agency, 2013).

Hydrogen Sulfide

Hydrogen Sulfide (H_2S) is associated with geothermal activity, oil and gas production, refining, sewage treatment plants, and confined animal feeding operations. Hydrogen sulfide is extremely hazardous in high concentrations; especially in enclosed spaces (800 parts per million [ppm] can cause death) (Centers for Disease Control and Prevention, 2014). The Occupational Safety and Health Administration (OSHA) regulates workplace exposure to H_2S.

Other Pollutants

The State of California has established air quality standards for some pollutants not addressed by Federal standards. The CARB has established State standards for hydrogen sulfide, sulfates, vinyl chloride, and visibility reducing particles. The following section summarizes these pollutants and provides a description of the pollutants' physical properties, health and other effects, sources, and the extent of the problems.

Sulfates

Sulfates (SO_4^{2-}) are the fully oxidized ionic form of sulfur. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to SO_2 during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO_2 to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features.

The CARB sulfates standard is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels above the standard include a decrease in ventilator function, aggravation of asthmatic symptoms, and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility, and, due to the fact that they are usually acidic, can harm ecosystems and damage materials and property.

Visibility Reducing Particles

Visibility reducing particles are a mixture of suspended particulate matter consisting of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. The standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

Vinyl Chloride

Vinyl Chloride (C_2H_3Cl or VCM) is a colorless gas that does not occur naturally. It is formed when other substances such as trichloroethane, trichloroethylene, and tetrachloroethylene are broken down. Vinyl chloride is used to make polyvinyl chloride which is used to make a variety of plastic products, including pipes, wire and cable coatings, and packaging materials.

Odors

Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from the psychological (i.e. irritation, anger, or anxiety) to the physiological, including circulatory and respiratory effects, nausea, vomiting, and headache.

The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell very minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor and in fact an odor that is offensive to one person may be perfectly acceptable to another (e.g., fast food restaurant). It is important to also note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because

of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition, only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word strong to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

Toxic Air Contaminants

TACs are air pollutants that may cause or contribute to an increase in mortality or serious illness, or which may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air, but due to their high toxicity, they may pose a threat to public health even at very low concentrations. Because there is no threshold level below which adverse health impacts are not expected to occur, TACs differ from criteria pollutants for which acceptable levels of exposure can be determined and for which state and federal governments have set ambient air quality standards. TACs, therefore, are not considered "criteria pollutants" under either the FCAA or the CCAA and are thus not subject to NAAQS or CAAQS. Instead, the U.S. EPA and CARB regulate Hazardous Air Pollutants (HAPs) and TACs, respectively, through statutes and regulations that generally require the use of the maximum or best available control technology to limit emissions. In conjunction with District rules, these Federal and State statutes and regulations establish the regulatory framework for TACs. At the national levels, the U.S. EPA has established NESHAPs in accordance with the requirements of the FCAA and subsequent amendments. These are technology-based source-specific regulations that limit allowable emissions of HAPs.

Within California, TACs are regulated primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB designates a substance as a TAC. Existing sources of TACs that are subject to the Air Toxics Hot Spots Information and Assessment Act are required to: (1) prepare a toxic emissions inventory; (2) prepare a risk assessment if emissions are significant; (3) notify the public of significant risk levels; and (4) prepare and implement risk reduction measures.

At the state level, the CARB has authority for the regulation of emissions from motor vehicles, fuels, and consumer products. DPM was identified by the CARB as a TAC in 1998 and is the primary TAC of concern for mobile sources. Of all controlled TACs, emissions of DPM are estimated to be responsible for about 70 percent of the total ambient TAC risk. Health risks associated with DPM are primarily associated with potential cancer risks (California Air Resources Board, 2019b). The CARB has made the reduction of the public's exposure to DPM one of its highest priorities, with an aggressive plan to require cleaner diesel fuel and cleaner diesel engines and vehicles (California Air Resources Board, 2005a).

At the local level, air districts have the authority over stationary or industrial sources. All projects that require air quality permits from the SCAQMD are evaluated for TAC emissions. The SCAQMD limits

emissions and public exposure to TACs through a number of programs. The SCAQMD prioritizes TAC-emitting stationary sources, based on the quantity and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors. The SCAQMD requires a comprehensive health risk assessment for facilities that are classified in the significant-risk category, pursuant to AB 2588.

3.2.2 Environmental Setting

3.2.2.1 Geography

The City of Los Angeles is located in the SCAB (or Basin). The SCAB consists of an approximate 6,600-square mile area bound by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area of Riverside County. The Basin's terrain and geographical location (i.e., a coastal plain with connecting broad valleys and low hills) cause its distinctive climate.

3.2.2.2 Climate

The regional climate significantly influences the air quality in the Basin. Temperature, wind, humidity, precipitation and even the amount of sunshine influence the quality of the air. Within the SCAB, annual average temperatures, in degrees Fahrenheit (° F), generally range from the low to mid 60's. January is the coldest month throughout the Basin, with average minimum temperatures of 47° F in downtown Los Angeles and 36° F in San Bernardino. All portions of the Basin have recorded maximum temperatures above 100° F. The annual average relative humidity within SCAB generally ranges from 71 percent along the coast to 59 percent inland. More than 90 percent of the Basin's rainfall occurs between the months of November and April. Monthly and yearly rainfall totals are extremely variable within the SCAB. On average, annual rainfall varies from approximately nine inches in Riverside to 14 inches in downtown Los Angeles. The importance of wind to air pollution is considerable. The direction and speed of the wind determines the horizontal dispersion and transport of air pollutants. During the late autumn to early spring rainy season, the Basin is subjected to wind flows associated with traveling storms moving through the region from the northwest. (South Coast Air Quality Management District, 1980)

In the City of Los Angeles, average temperatures generally range from the upper 40's during winter months to the low 80's during the summer months. The warmest month of the year is August, with an average maximum temperature of 83° F; while the coldest month of the year is January, with an average minimum temperature of 48° F. The annual average precipitation in Los Angeles is 14.8 inches. The highest rainfall generally occurs between the months of November and April. (Western Regional Climate Center, 2018)

3.2.2.3 Temperature Inversions

Under normal meteorological conditions, the temperature of the atmosphere decreases with increased altitude. However, when the temperature of the atmosphere increases with altitude, the phenomenon is termed an inversion. These inversions can restrict the vertical mixing of air and pollutants, which can contribute to increased ground-level pollutant concentrations. (South Coast Air Quality Management District, 1980)

In the SCAB, two distinct temperature inversion types commonly occur. The first type of inversion typically occurs during the warmer summer months when high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. The second inversion type primarily occurs in the winter, when nights are longer and onshore airflow is weakest. This inversion occurs in conjunction with the nighttime drainage of cool air off the surrounding mountains followed by the seaward drift of this pool of cool air. In general, inversions in the Basin are lower before sunrise than during the daylight hours. As the day progresses, the mixing height normally increases as the warming of the ground heats the surface air layer. The breakup of inversion layers frequently occurs during mid- to late-afternoon on hot summer days. Winter inversions usually break up by mid-morning. (South Coast Air Quality Management District, 1980)

3.2.2.4 Ambient Air Quality and Local Health Risk

Criteria Air Pollutants

Air pollutant concentrations are measured at several monitoring stations in the SCAB. The Los Angeles-North Main Street monitoring station is the closest representative monitoring station with sufficient data to meet U.S. EPA and/or CARB criteria for quality assurance. The Los Angeles-North Main Street monitoring station monitors ambient concentrations of O_3, PM_{10}, $PM_{2.5}$, and NO_2. Ambient monitoring data were obtained for the last three years of available measurement data (i.e., 2014 through 2016) and are summarized in **Table 3.2-2**. As depicted, the State and Federal $PM_{2.5}$, as well as the State O_3 and PM_{10} standards were exceeded on numerous occasions during the past three years. State and Federal standards for NO_2 have not been exceeded during the last three years of available data.

Toxic Air Contaminants

As noted above, the Los Angeles region currently does not meet the State or Federal air quality standards for fine particulate matter ($PM_{2.5}$). In the Los Angeles area, mobile sources are a primary contributor to ambient PM concentrations, including DPM, which poses the most significant health risk. Major sources of DPM in the general vicinity of the Project Site (i.e., project footprint) include railroad operations at nearby railyards, including the Union Pacific Los Angeles Transportation Center (UP LATC) Railyard and the four Commerce Railyards, as well as heavy-duty vehicles on area freeways, including U.S. Route 101 (U.S. 101), Interstate 10 (I-10), and Interstate 5 (I-5).

UP LATC Railyard

The UP LATC Railyard is located at 750 Lamar Street in Los Angeles, California, roughly 1.2 miles north of the Project Site. Activities at the UP LATC Railyard include receiving inbound trains, switching cars, loading and unloading intermodal trains, storing in containers and chassis, building and departing outbound trains, and repairing freight cars and intermodal containers/chassis. The UP LATC Railyard emission sources include, but are not limited to, locomotives, cargo handling equipment, on-road diesel-fueled trucks, other vehicles and off-road equipment, and transport refrigeration units and refrigerated railcars (reefer cars). The facility operates 24 hours a day, 365 days a year.

Table 3.2-2: Summary of Ambient Air Quality Monitoring Data

Pollutant	Monitoring Year		
	2014	2015	2016
Ozone (O_3)			
Maximum concentration (1-hour/8-hour average)	0.113/0.004	0.104/0.074	0.103/0.078
Number of days state/national 1-hour standard exceeded	3/0	2/0	2/0
Number of days state/national 8-hour standard exceeded	7/6	6/6	4/4
Nitrogen Dioxide (NO_2)			
Maximum concentration (1-hour average)	82.1	79.1	64.7
Annual average	22	22	20
Number of days state/national standard exceeded	0/0	0/0	0/0
Suspended Particulate Matter ($PM_{2.5}$)			
Maximum concentration (national/state)	59.9/65.0	56.4/70.3	44.3/49.4
Annual Average (national/state)	NA/ NA	12.3/12.5	11.7/12.0
Number of days national standard exceeded (measured/calculated)	6/NA	7/8.4	2/2.1
Suspended Particulate Matter (PM_{10})			
Maximum concentration (national/state)	66.0/86.8	73.0/88.5	64.0/74.6
Annual Average (national/state)	30.6/30.2	27.1/27.0	25.8/NA
Number of days state standard exceeded (measured/calculated)	38/18.7	30/13.8	21/NA
Number of days national standard exceeded (measured/calculated)	0/0	0/0	0/0

ppm = parts per million by volume, µg/m3 = micrograms per cubic meter, NA=Not Available
1. Based on ambient concentrations obtained from the Los Angeles-North Main Street Monitoring Station.
2. Measured days are those days that an actual measurement was greater than the standard. Calculated days are estimated days that a measurement would have exceeded the standard had measurements been collected every day.
Source: (South Coast Air Quality Management District, 2016)

In 2007, the CARB conducted a health risk assessment to evaluate the impacts associated with toxic air contaminants emitted in and around UP LATC (California Air Resources Board, 2007a). Predicted carcinogenic risk isopleths for the UP LATC are depicted in **Figure 3.2-1,** Potential Estimated Regional Cancer Risks from the Union Pacific Los Angeles Transportation Center Railyard. The potential carcinogenic risk levels associated with the estimated DPM emissions at the UP LATC Railyard are displayed by isopleths, based on the 80th percentile breathing rate and 70-year exposure duration for residents. As shown in **Figure 3.2-1**, the Project Site is located between the predicted 10 and 25 in a million risk carcinogenic risk isopleth of the UP LATC Railyard.

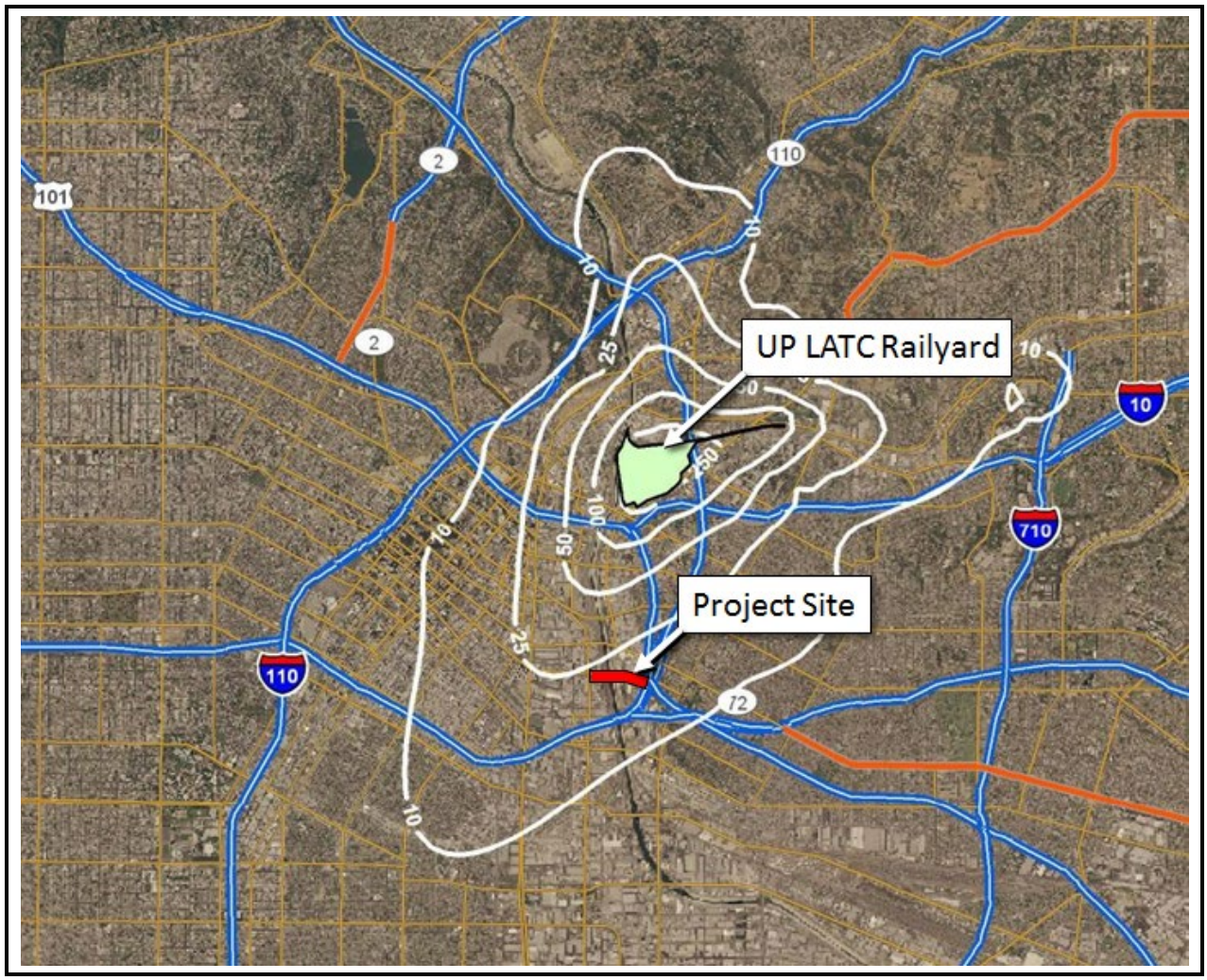
Four Commerce Railyards

The four Commerce railyards are located approximately 2.0 miles south of the Project Site. The four Commerce railyards are operated by both UP Railroad and BNSF Railway (BNSF). These railyards are described below:

- The *UP Commerce Railyard* supports intermodal activities. It includes classification tracks, a gate complex for inbound and outbound intermodal truck traffic, intermodal loading and unloading tracks, a locomotive service track, a locomotive maintenance shop, a freight car repair shop, an on-site wastewater treatment plant, and various buildings and facilities supporting railroad and contractor operations.
- The *BNSF Hobart Railyard* is the largest intermodal railyard in the United States. It supports intermodal and classification activities with locomotive switching, locomotive line haul, cargo handling equipment, track maintenance equipment, portable engines, on-road fleet vehicles, on-road container trucks, transportation refrigeration units, and permitted stationary source activities. An adjacent mainline runs south of the Hobart railyard and supports freight trains and commuter lines for both Metrolink and Amtrak.
- The *BNSF Sheila Mechanical Railyard* is mainly a maintenance and repair shop serving mostly the BNSF Hobart Railyard. It consists of a locomotive fueling platform, diesel engine repair facility (operated by General Electric), railcar repair building, storage areas, equipment service areas, and an administration building. The main railway line runs south and west of the classification yard and includes freight and commuter (Amtrak and Metrolink) operations along the same lines.
- The *BNSF Commerce Eastern Railyard* is primarily a small intermodal facility with a focus on local domestic containers. It lies diagonally opposite and across from the BNSF Sheila Mechanical Railyard. The BNSF Commerce Eastern Railyard supports intermodal and a small amount of classification activities with very few trains loaded each day.

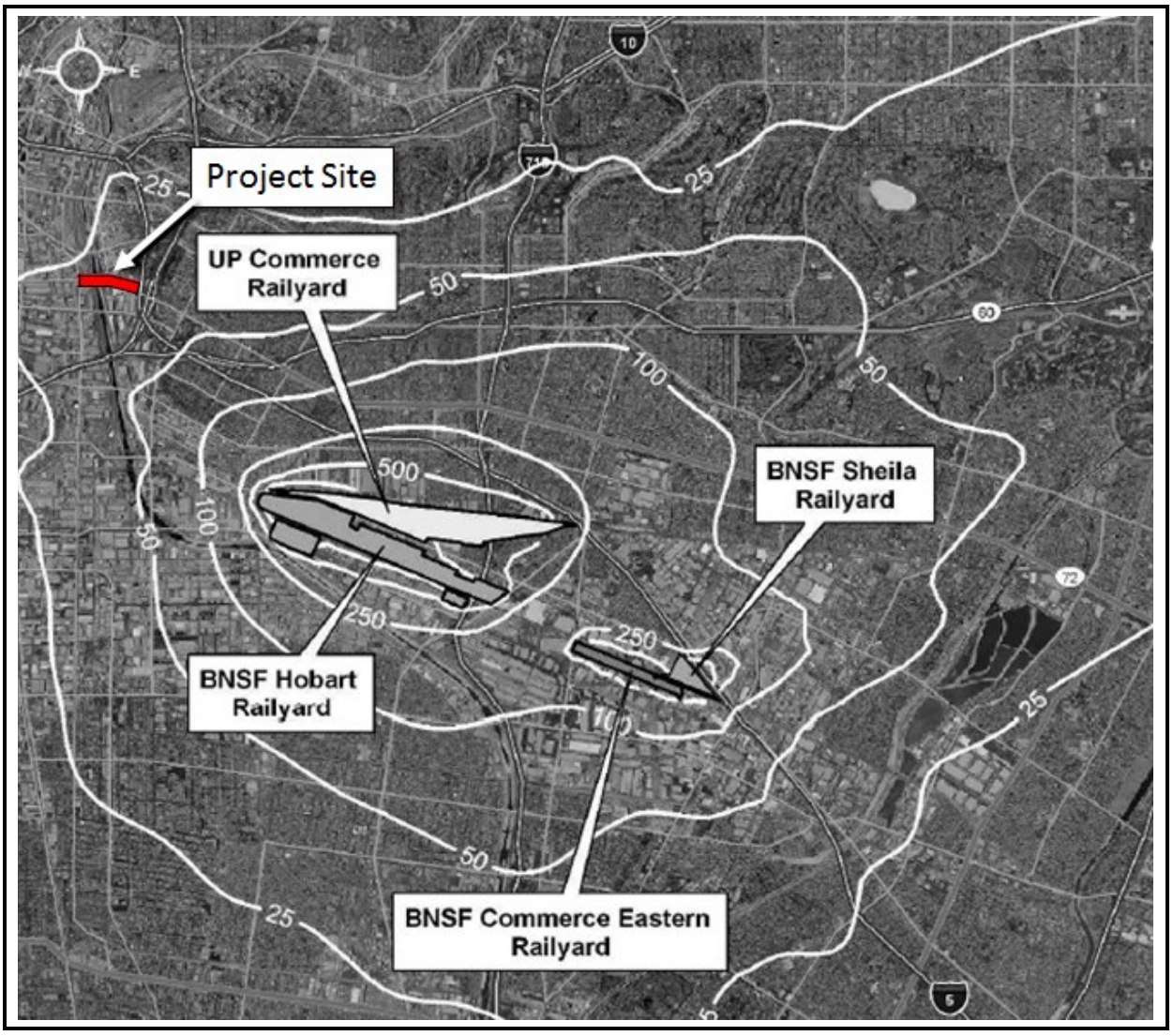
In 2007, the CARB conducted a health risk assessment to evaluate the health impacts associated with toxic air contaminants emitted in and around the four Commerce railyards (California Air Resources Board, 2007b). The predicted combined carcinogenic risk isopleths for the four Commerce railyards are depicted in **Figure 3.2-2,** Potential Estimated Regional Cancer Risks from the Four Commerce Railyards. As shown, the Project Site is located between the predicted 25 and 50 in a million carcinogenic risk isopleth of the four Commerce railyards.

Figure 3.2-1: Potential Estimated Regional Cancer Risks from the Union Pacific Los Angeles Transportation Center Railyard



Carcinogenic risk isopleths and corresponding risk values are depicted in white.
Not to scale. Locations are approximate.
Source: (California Air Resources Board, 2007a)

Figure 3.2-2: Potential Estimated Regional Cancer Risks from the Four Commerce Railyards



Carcinogenic risk isopleths and corresponding risk values are depicted in white.
Not to scale. Locations are approximate.
Source: (California Air Resources Board, 2007b)

Multiple Air Toxics Exposure Study IV Study

In May 2015, the SCAQMD released the Multiple Air Toxics Exposure Study IV (MATES IV) (South Coast Air Quality Management District, 2015). The study is a follow up to previous studies conducted by the SCAQMD for the purposes of evaluating air toxics exposure in the SCAB. The toxic emissions inventory in MATES IV includes point sources, area sources, on-road mobile sources, and off-road mobile sources. The study measured 37 substances, including PM_{10}, $PM_{2.5}$, several organic compounds (i.e., formaldehyde, benzene, toluene, PAHs), heavy metals (i.e., manganese, copper, lead, and nickel), and other compounds. Two additional substances, black carbon and ultrafine particles, were also included in the study.

Based on the exposure levels from the 10 monitoring sites used in the study, the average cancer risk from air toxics in the SCAB is 65 percent lower than the estimated risk identified in the previous MATES III time period (2004-2006). This risk refers to the expected number of additional cancers in a population of one million individuals if they were exposed to these levels over a 70-year lifetime. About 90 percent of the risk is attributed to emissions associated with mobile sources, with the remainder attributed to toxins emitted from stationary sources. The results indicate that DPM is the major contributor to air toxics risk, accounting on average for about 68 percent of the total estimated air toxics risk. This compares to about 84 percent in MATES III. Although the estimated carcinogenic risks have declined compared to the MATES III period, areas near the ports and near transportation corridors continue to show the highest air toxics risk. None of the annual averages of pollutants measured were above the chronic reference exposure levels for non-cancer health effects.

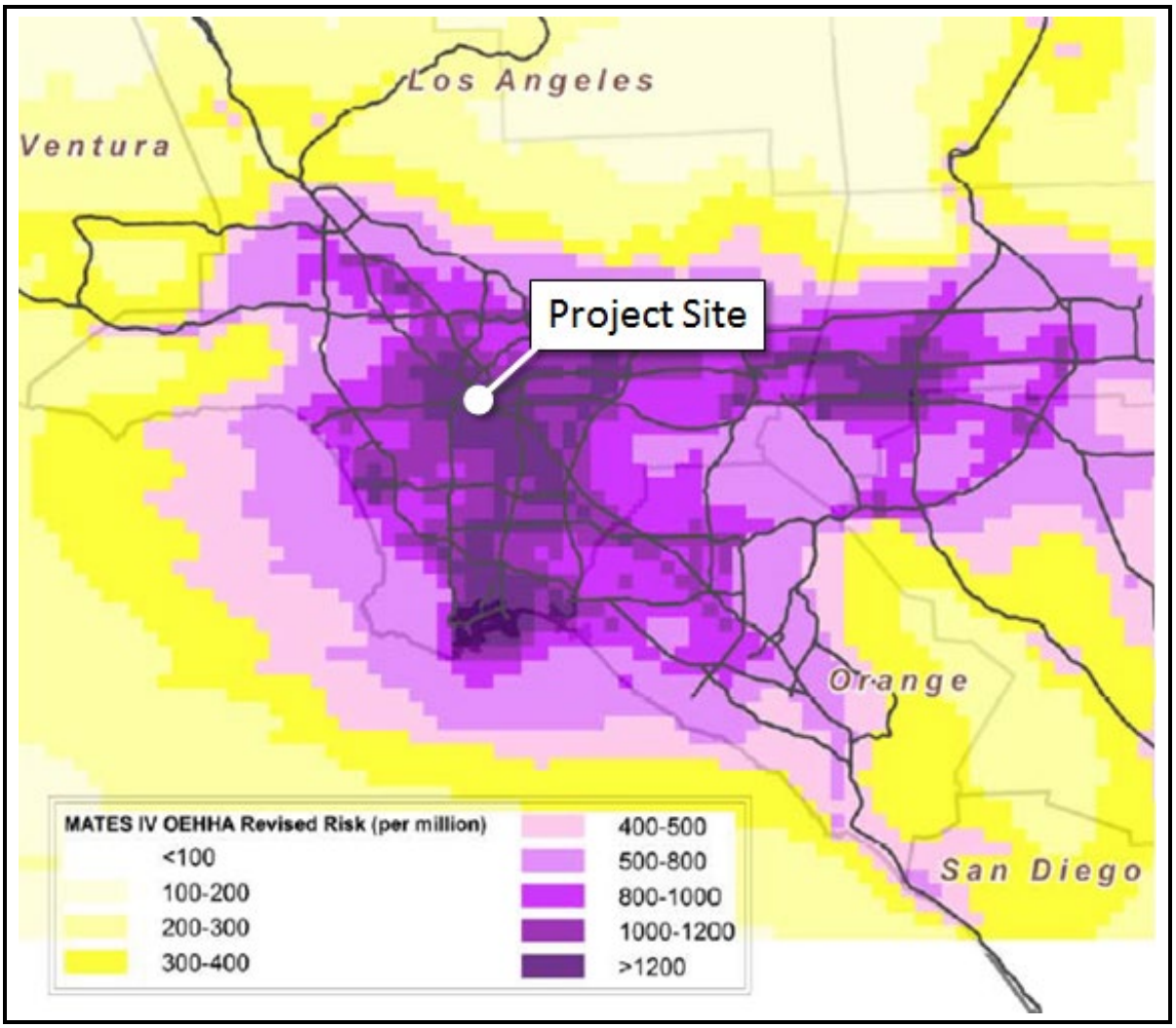
Predicted carcinogenic risks for the Los Angeles region, utilizing the most current Office of Environmental Health Hazard Assessment (OEHHA)-recommended methodologies, are depicted in **Figure 3.2-3,** Central Los Angeles MATES IV Simulated Air Toxic Cancer Risk (2012-2013). As shown, risks are generally higher in the central Los Angeles area due to the convergence of various major transportation corridors, as well as contributions from railyards, railroads, and stationary source operations. Based on current OEHHA-recommended methodologies, predicted carcinogenic risks in the central Los Angeles area are generally greater than 1,200 per million.

3.2.2.5 Sensitive Receptors

One of the most important reasons for air quality standards is the protection of those members of the population who are most sensitive to the adverse health effects of air pollution, termed "sensitive receptors." The term “sensitive receptors” refers to specific population groups, as well as the land uses where individuals would reside for long periods. Commonly identified sensitive population groups are children, the elderly, the acutely ill, and the chronically ill. Commonly identified sensitive land uses would include facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Residential dwellings, schools, parks, playgrounds, childcare centers, convalescent homes, and hospitals are examples of sensitive land uses.

Existing land uses located to the north, south, and west of the Project Site consist predominantly of a mix of industrial and commercial uses. The nearest sensitive land uses in the vicinity of the proposed East Park are residential uses, located approximately 350 feet to the north of the Project Site, along South Clarence Street. The nearest sensitive land use in the vicinity of the proposed West Park is a residential development referred to as the “Brick Lofts,” which is located approximately 700 feet south of the Project

Figure 3.2-3: Central Los Angeles MATES IV Simulated Air Toxic Cancer Risk (2012-2013)



Based on the updated OEHHA methodology.
Not to scale. Locations are approximate.
Source: (South Coast Air Quality Management District, 2015)

Site, near the intersection of Mateo Street and Jesse Street. Additional residential land uses are located approximately 700 feet east of the proposed East Park, across U.S. 101.

3.2.2.6 Odors

No major sources of odors have been identified in the project area.

3.2.2.7 Naturally Occurring Asbestos

Naturally occurring asbestos (NOA) areas are identified based on the type of rock found in the area. Asbestos-containing rocks found in California are ultramafic rocks, including serpentine rocks. Asbestos has been designated a toxic air contaminant by the CARB. According to the California Geological Survey, the Project Site is not located in an area of NOA (California Geological Survey, 2011).

3.2.3 Environmental Impact Analysis

3.2.3.1 Methodology

Construction Emissions

Short-term emissions associated with construction activities are largely dependent on the type of development proposed, area of ground disturbance, amount of material to be imported and exported, equipment required, and construction schedules. Construction emissions of criteria air pollutants were calculated using the California Emissions Estimator Model (CalEEMod), version 2016.3.2 computer program. Modeling was conducted for the proposed Project based on estimated material to be imported and exported, off-road equipment usage, and construction schedules provided by the project engineers. Other construction modeling assumptions, including mobile-source emission factors and usage rates, were based on default parameters contained in the model for Los Angeles County. Emissions modeling assumptions and output files are provided in the *Air Quality and Greenhouse Gas Impact Assessment* (AMBIENT Air Quality & Noise Consulting, 2019) prepared for the proposed Project.

Increased exposure of sensitive land uses to localized pollutant concentrations were assessed in accordance with the methodology promulgated by SCAQMD in its Localized Significance Threshold (LST) Methodology for CEQA Evaluations (South Coast Air Quality Management District, 2008). Based on the estimated equipment usage and information provided by the project engineers, construction of the proposed Project would result in an estimated temporary disturbance of approximately 1.5 to 2 acres, or more, per day, during excavation and grading of the site. As previously noted, the nearest existing sensitive land uses include residential dwellings located approximately 350 feet (107 meters) north of the construction site. In accordance with SCAQMD's LST methodology, emissions of PM_{10} and $PM_{2.5}$ were evaluated based on a calculated area of disturbance of two acres/day and the distance to the nearest sensitive land uses (100 meters). Emissions of NO_x and CO were evaluated for nearby areas of potential short-term public exposure assuming this same potential area of disturbance and a distance of 25 meters. Emissions modeling assumptions and output files are provided in the *Air Quality and Greenhouse Gas Impact Assessment* (AMBIENT Air Quality & Noise Consulting, 2019) prepared for the proposed Project.

Operational Emissions

Long-term operational emissions of criteria air pollutants were calculated using the CalEEMod, version 2016.3.2, computer program. Modeling was conducted based on the estimated building square footage to be constructed and vehicle trip-generation rates identified in the *Traffic Impact Analysis* prepared for the proposed Project (Kimley-Horn and Associates, Inc., 2019a). Project and site enhancements that would contribute to reductions in mobile-source emissions were also accounted for in the analysis, based on methodologies contained in the California Air Pollution Control Officers Association's Quantifying Greenhouse Gas Mitigation Measures and the default emission reductions identified in CalEEMod. These measures included reductions associated with providing increased diversity (**LUT-3**), transit accessibility within 0.5 miles of the project site (**LUT-5**), and improvements to the existing pedestrian network (**SDT-1**). Increased exposure of sensitive land uses to localized pollutant concentrations were qualitatively assessed. Emissions modeling files are provided in the *Air Quality and Greenhouse Gas Impact Assessment* (AMBIENT Air Quality & Noise Consulting, 2019) prepared for the proposed Project.

Operational emissions associated with the existing industrial uses that were removed were also quantified based on the trip-generation rates identified in the traffic analysis prepared for this project and default energy usage, water usage, and waste-generation rates identified in CalEEMod. Project-generated emissions were compared to estimated emissions associated with the removed industrial uses for the determination of net changes in operational emissions. It is important to note that the analysis does not account for potential emissions from the onsite area or stationary sources that may have been associated with the operation of the existing industrial uses. As a result, net changes in operational emissions are conservatively estimated.

3.2.3.2 Screening Analysis

Several impacts and corresponding thresholds of significance in the following section were eliminated from further analysis in this EIR. Topics were eliminated if the IS for the proposed Project concluded there would be "No Impact," or if impacts were identified to be "Less Than Significant… and will not be discussed further in the EIR." Therefore, only the topics described in the section below were determined to require further analysis in this EIR. A copy of the Initial Study, which contains the eliminated topics, is provided in **Appendix A**.

3.2.3.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and the *L.A. CEQA Thresholds Guide*, the proposed Project would have a significant impact on Air Quality if it would:

III(a) Conflict with or obstruct implementation of the applicable air quality plan.

B.3 Toxic Air Contaminants
The determination of significance shall be made on a case-by-case basis, considering the following factors:

- The regulatory framework for the toxic material(s) and process (es) involved;
- The proximity of the toxic air contaminants to sensitive receptors;
- The quantity, volume and toxicity of the contaminants expected to be emitted;

- The likelihood and potential level of exposure; and
- The degree to which project design will reduce the risk of exposure.

Regional Air Quality Impacts

Regional significance thresholds recommended by SCAQMD are summarized in **Table 3.2-3**.

Table 3.2-3: SCAQMD-Recommended CEQA Significance Thresholds

Pollutant	Construction Emissions (pounds/day)	Operational Emissions (pounds/day)
VOC	75	55
NO_x	100	55
CO	550	550
PM_{10}	150	150
$PM_{2.5}$	55	55
SO_x	150	150

Source: (South Coast Air Quality Management District, 2019)

Project-generated emissions that exceed these mass emissions thresholds would be considered to have a potentially significant impact, which could interfere with regional air quality attainment plans.

Exposure to Localized Pollutant Concentrations

In addition to the mass emissions thresholds identified above, the SCAQMD has established the following threshold criteria to determine if a project has the potential to contribute to a localized exceedance of the CAAQS in the immediate vicinity of the site:

- California State 1-hour CO standard of 20.0 parts per million (ppm)
- California State 8-hour CO standard of 9.0 ppm
- California State 1-hour NO_2 standard of 0.25 ppm
- SCAQMD 24-hour construction PM_{10} LST of 10.4 microgram per cubic meter ($\mu g/m^3$)
- SCAQMD 24-hour construction $PM_{2.5}$ LST of 10.4 $\mu g/m^3$
- SCAQMD 24-hour operational PM_{10} LST of 2.5 $\mu g/m^3$
- SCAQMD 24-hour operational $PM_{2.5}$ LST of 2.5 $\mu g/m^3$

The SCAQMD provides screening criteria that can be relied upon to determine if the daily emissions for proposed construction or operational activities would have a potential to exceed the LSTs. LSTs represent the maximum emissions at a project site that are not expected to cause or contribute to an exceedance of the most stringent Federal or State AAQS. LSTs are based on the ambient concentrations of that pollutant within the project area and the distance to the nearest sensitive receptor. An LST analysis for construction activities is applicable to projects five acres, or less, in size; but can be used to screen larger projects to determine whether or not dispersion modeling may be

required (South Coast Air Quality Management District, 2018). If calculated daily emissions are below the LST screening levels the project would be considered to have a less than significant impact.

In addition to the above criteria for evaluation of localized air quality impacts, projects that would result in emissions of carcinogenic or toxic contaminants that exceed the maximum individual cancer risk of 10 in one million or a hazard index of one would be considered to have a potentially significant impact.

III(b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

III(c) Expose sensitive receptors to substantial pollutant concentrations.

III(d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

3.2.3.4 Construction Impacts

III(a): Conflict with or obstruct implementation of the applicable air quality plan.

The AQMP is based on assumptions provided by CARB and SCAG related to the most recent motor vehicle and demographic information. The AQMP projections are based, in part, on land use designations and growth forecasts identified in land use plans from cities and counties located in the SCAB. Projects that would be considered to conflict with existing or future growth projections or that would exceed SCAQMD-recommended project-level significance thresholds would potentially conflict with the AQMP.

Construction-generated emissions were quantified using the CalEEMod, version 2016.3.2 computer program based on the estimated amount of material to be imported and exported, off-road equipment usage, and construction schedules provided by the project engineers. Other construction modeling assumptions, including mobile-source emission factors and usage rates, were based on default parameters contained in the model for Los Angeles County. Construction emissions are summarized in **Table 3.2-4**. Emissions modeling assumptions and results are included in the *Air Quality and Greenhouse Gas Impact Assessment for the Sixth Street PARC* (AMBIENT Air Quality & Noise Consulting, 2019) prepared for the proposed Project.

As noted in **Table 3.2-4**, construction of the proposed Project would generate maximum-daily emissions of approximately 17.3 pounds per day (lbs/day) of VOCs, 179.8 lbs/day of NO_x, 121.3 lbs/day of CO, 0.3 lbs/day of SO_X, 28.7 lbs/day of PM_{10}, and 17.7 lbs/day of $PM_{2.5}$. Construction-generated emissions of NO_x would exceed SCAQMD's significance threshold of 100 lbs/day. As a result, this impact would be considered potentially significant.

To reduce construction-generated emissions, measures related to NO_x emissions would be implemented (see **MM-AQ-1** and **MM-AQ-2** in Section 3.2.5). With the use of off-road equipment meeting Tier 4 emission standards, maximum daily emissions of NO_x would be reduced to approximately 28 lbs/day and would not exceed SCAQMD's daily significance threshold of 100 lbs/day (refer to **Table 3.2-5**).

Proposed construction would be required to comply with SCAQMD's Rule 402 (Nuisance) and Rule 403 (Fugitive Dust), which identify measures that would be implemented for the control of fugitive dust generated during onsite ground-disturbance activities (see **MM-AQ-3** in Section 3.2.5). Emissions generated during construction could potentially conflict with or obstruct air quality planning efforts.

Table 3.2-4: Construction Emissions without Mitigation

Construction Activity	Emissions (lbs/day)[1]					
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Asphalt Demolition	2.9	28.8	22.6	0.0	1.7	1.4
Site Preparation & Material Export	5.5	54.5	31.8	0.1	9.0	5.5
Site Preparation & Material Import	8.3	87.5	51.5	0.1	17.1	10.4
Grading & Excavation	3.9	36.6	32.5	0.1	2.7	2.2
Park & Infrastructure Construction	2.8	26.7	21.2	0.0	1.6	1.3
Paving	3.2	23.3	19.6	0.0	1.5	1.1
Utility Installation	1.6	14.9	14.2	0.0	1.2	1.0
Building Construction	3.7	18.7	18.4	0.0	1.1	0.8
In-River Terracing	3.5	37.8	38.0	0.1	2.6	1.8
Maximum Daily Emissions[2]:	17.3	**179.8**	121.3	0.3	28.7	17.7
SCAQMD Daily Significance Daily Thresholds:	75	100	550	150	150	55
Exceeds Daily Significance Thresholds?	No	**Yes**	No	No	No	No

1. Emissions were quantified using the CalEEMod, v2016.3.2, computer program. Includes onsite and offsite sources. Does not include reductions in fugitive dust associated with compliance with SCAQMD's Rule 403. VOC and ROG emissions were considered equivalent. Totals may not sum due to rounding.
2. Maximum daily emissions assume site preparation, material import and export, and in-river terracing could potentially occur simultaneously on any given day. Maximum daily emissions exceeding SCAQMD significance thresholds depicted in bold font.
lbs/day = pounds per day
Refer to the Air Quality and Greenhouse Gas Impact Assessment prepared for the proposed Project for emissions modeling assumptions and results (AMBIENT Air Quality & Noise Consulting, 2019).

Table 3.2-5: Construction Emissions with Mitigation

Construction Activity	Emissions (lbs/day)[1]					
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Asphalt Demolition	0.6	3.4	19.7	0.0	0.4	0.2
Site Preparation & Material Export	1.4	6.3	41.0	0.1	3.2	0.3
Site Preparation & Material Import	1.9	14.6	60.5	0.1	5.9	2.9
Grading & Excavation	0.7	2.3	33.2	0.0	0.3	0.1
Park & Infrastructure Construction	0.6	2.4	25.4	0.0	0.4	0.2
Paving	1.3	2.1	24.0	0.0	0.3	0.0
Utility Installation	0.3	1.1	14.5	0.0	0.2	0.1
Building Construction	2.4	3.4	22.8	0.0	0.4	0.2
In-River Terracing	1.1	7.1	43.2	0.1	0.9	0.3
Maximum Daily[2]:	4.4	28.0	144.7	0.3	10.0	3.5
SCAQMD Significance Thresholds:	75	100	550	150	150	55
Exceeds Thresholds?	No	No	No	No	No	No

1. Emissions were quantified using the CalEEMod, v2016.3.2, computer program. Includes the use of off-road equipment meeting Tier 4 emissions standards and compliance with SCAQMD's Rule 403. VOC and ROG emissions were considered equivalent. Totals may not sum due to rounding.
2. Maximum daily emissions assume some activities, including site preparation, material import and export, and in-river terracing could potentially occur simultaneously on any given day.
Refer to the Air Quality and Greenhouse Gas Impact Assessment prepared for the proposed Project for emissions modeling assumptions and results(AMBIENT Air Quality & Noise Consulting, 2019).

However, with the implementation of **MM-AQ-1** through **MM-AQ-3** and compliance with applicable SCAQMD permits, impacts would be reduced to less than significant.

III(b): Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

According to the SCAQMD, individual projects that would exceed recommended significance thresholds would also be considered to result in a cumulatively considerable increase in emissions for which the basin is designated non-attainment. As noted above, maximum-daily construction-generated emissions of NO_x would exceed SCAQMD's recommended significance thresholds. As a result, construction of the proposed Project could result in a cumulatively considerable net increase of ozone-precursor pollutants for which the region is designated non-attainment, particularly if other projects in the general vicinity of the project site are under construction during the same construction period. However, with the implementation of **MM-AQ-1** through **MM-AQ-3** and compliance with applicable SCAQMD permits, impacts would be reduced to less than significant.

III(c): Expose sensitive receptors to substantial pollutant concentrations.

Localized Pollutant Concentrations from Onsite Sources

Construction projects can result in short-term increases of TACs, as well as emissions of airborne fugitive dust. The SCAQMD has developed LSTs for the evaluation of short-term localized air quality impacts. The LSTs are based on CAAQS, which have been established to provide a margin of safety regarding the protection of public health and welfare.

Proposed Project-generated construction emissions in comparison to SCAQMD's LSTs are summarized in **Table 3.2-6**. Proposed Project-generated construction emissions would not exceed SCAQMD corresponding LSTs. Therefore, localized air quality impacts associated with the proposed Project would be less than significant.

Asbestos

As described in Section 3.2.2.7, the Project Site is not located in an area of naturally occurring asbestos. In addition, the proposed Project would not involve the demolition of structures having ACM. As a result, impacts associated with exposure to asbestos would be less than significant.

Diesel-Exhaust Particulate Matter

Health risks associated with DPM are primarily associated with potential cancer risks (California Air Resources Board, 2019b). The dose to which receptors are exposed is the primary factor used to determine carcinogenic health risks. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. The calculation of cancer risk associated with exposure to TACs are typically calculated based on a 25- to 30-year period of exposure. However, such assessments should be limited to the period and duration during which exposure occurs.

Assuming that construction activities involving the use of diesel-fueled equipment would occur over an approximate thirty-month period, project-related construction activities would constitute less than eight percent of the typical exposure period. As a result, because the use of off-road heavy-duty diesel equipment would be temporary and episodic occurring over a relatively large area, and the highly

dispersive properties of DPM, project construction would not expose sensitive receptors to substantial emissions of DPM in excess of applicable thresholds. In addition, **MM-AQ-1** through **MM-AQ-3** would require the implementation of various measures that would significantly reduce construction-generated emissions, including the use of Tier 4 off-road equipment and newer on-road haul trucks, which would significantly reduce construction-generated DPM. Therefore, impacts would be less than significant.

Table 3.2-6: On-Site Construction Emissions

Construction Activity	Emissions (lbs/day)[1]					
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Asphalt Demolition	0.4	1.7	18.5	0.0	0.1	0.1
Site Preparation & Material Export	1.0	4.3	38.0	0.1	2.4	0.1
Site Preparation & Material Import	1.3	5.7	55.9	0.1	4.7	2.6
Grading & Excavation	0.5	2.2	32.0	0.0	0.0	0.0
Park & Infrastructure Construction	0.5	2.3	24.5	0.0	0.1	0.1
Paving	1.3	2.1	23.2	0.0	0.0	0.0
Utility Installation	0.2	1.0	13.9	0.0	0.0	0.0
Building Construction	2.4	3.3	22.4	0.0	0.2	0.2
In-River Terracing	0.7	3.1	10.3	0.1	0.1	0.1
Maximum PARC Construction Emissions[2]:	3.0	13.1	134.2	0.3	7.2	2.8
Sixth Street Viaduct Construction Emissions[4]:	15.8	124.1	80.4	--	6.4	5.7
Total PARC Project and Sixth Street Viaduct Construction Emissions:	18.8	137.2	214.6	0.3	13.6	8.5
SCAQMD Localized Significance Thresholds[2]:	None	108	827	None	43	10
PARC Project Construction Emissions Exceeds Thresholds?	-	No	No	-	No	No
Total PARC Project and Sixth Street Viaduct Project Construction Emissions Exceeds Thresholds?	-	Yes	No	-	No	No

1. Emissions were quantified using the CalEEMod, v2016.3.2 computer program. Includes use of Tier 4 heavy-duty off-road equipment and implementation of dust control measures in compliance with SCAQMD Rule 403. Totals may not sum due to rounding.
2. Maximum daily emissions assume some activities, such as material import and export, could occur simultaneously on any given day.
3. LSTs are based on a two-acre site with sensitive receptors located at 100 meters for PM_{10} and $PM_{2.5}$ and 25 meters for NO_x and CO.
4. Based on emissions estimates derived from the Sixth Street Viaduct Improvement Project Final Environmental Impact Report (2011). Includes construction of main spans, sidewalks, roadway surface road demolition and reconstruction.
Refer to the Air Quality and Greenhouse Gas Impact Assessment prepared for the proposed Project for emissions modeling assumptions and results (AMBIENT Air Quality & Noise Consulting, 2019).

III(d): Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The occurrence and severity of odor impacts depends on numerous factors, including: the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptors. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and regulatory agencies.

No major sources of odors have been identified in the project area. However, construction of the proposed Project would involve the use of a variety of gasoline or diesel-powered equipment that would emit exhaust fumes. Exhaust fumes, particularly diesel-exhaust, may be considered objectionable by some people. In addition, pavement coatings and architectural coatings used during project construction would also emit temporary odors. However, construction-generated emissions would occur intermittently throughout the workday and would dissipate rapidly within increasing distance from the source. As a result, short-term construction activities would not expose a substantial number of people to frequent odorous emissions. Therefore, impacts would be less than significant.

3.2.3.5 Operational Impacts

III(a): Conflict with or obstruct implementation of the applicable air quality plan.

As described Section 3.2.3.4, projects that would conflict with existing or future growth projections or that would exceed SCAQMD-recommended project-level significance thresholds would potentially conflict with the AQMP.

The proposed Project includes the creation of public recreational space on approximately 13 acres in areas underneath and adjacent to the Viaduct in the City of Los Angeles. The proposed Project would not result in overall increases in emissions of ozone-precursor pollutants (VOC and NO_x) or PM that would exceed SCAQMD's recommended significance thresholds. Long-term operational emissions associated with the proposed Project would be primarily associated with motor vehicle operations, energy use, and area sources. Operational emissions were quantified using the CalEEMod, version 2016.3.2 computer program and are summarized in **Table 3.2-7**.

As noted, the proposed Project would result in daily emissions of approximately 6.1 lbs/day of ROG, 29.5 lbs/day of NO_x, 74.3 lbs/day of CO, 0.3 lbs/day of SO_x, 32.7 lbs/day of PM_{10}, and 9.0 lbs/day of $PM_{2.5}$. In comparison to the existing industrial land uses removed, the proposed Project would result in an overall net increase in operational emissions of approximately 0.5 lbs/day of ROG, 26.1 lbs/day of NO_x, 65.5 lbs/day of CO, 0.2 lbs/day of SO_x, 30.9 lbs/day of PM_{10}, and 8.4 lbs/day of $PM_{2.5}$. The maximum-daily emissions identified in **Table 3.2-7** were conservatively estimated assuming all recreational activities and uses could potentially operate simultaneously on any given day. Emissions of criteria air pollutants would not exceed SCAQMD's significance thresholds.

When evaluated on an annual basis, considering the number of events anticipated to occur, the proposed Project would result in an overall emissions reduction when compared to the existing industrial uses that were removed. Estimated net changes in annual operational emissions are summarized in **Table 3.2-8**. As such, long-term operation of the proposed Project would not conflict with or obstruct air quality planning efforts. Therefore, impacts would be less than significant.

Table 3.2-7: Maximum Daily Operational Emissions without Mitigation

Land Use/Event (Capacity)	Emissions (lbs/day)[1]					
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Special Events (1,000)	1.1	5.5	13.7	0.1	6.2	1.7
Special Events (2,000)	2.2	10.9	27.4	0.1	12.3	3.4
Special Events (3,250)	3.6	17.7	44.5	0.2	20.0	5.5
Special Events (5,000)	5.5	27.3	68.5	0.3	30.8	8.5
Soccer Fields	0.2	0.8	2.0	0.0	0.9	0.2
East & West Park Uses & Buildings	0.4	1.4	3.8	0.0	1.0	0.3
Peak Daily[2]:	6.1	29.5	74.3	0.3	32.7	9.0
Industrial Land Uses Removed:	5.9	4.7	12.2	0.1	3.3	1.1
Net Change:	0.5	26.1	65.5	0.2	30.9	8.4
SCAQMD Significance Thresholds:	55	55	550	150	150	55
Exceeds Thresholds?	No	No	No	No	No	No

1. Emissions were quantified using the CalEEMod, v2016.3.2, computer program. Totals may not sum due to rounding.
2. Peak daily emissions assumes use of soccer fields, park uses, on-site buildings, and maximum event (5,000 attendees) could occur simultaneously on the same day.
3. Mobile-source emissions were quantified based on trip-generation rates obtained from the traffic analysis prepared for this project and default assumptions contained in CalEEMod for Los Angeles County.
lbs/day = pounds per day
Refer to the Air Quality and Greenhouse Gas Impact Assessment prepared for the proposed Project for emissions modeling assumptions and results (AMBIENT Air Quality & Noise Consulting, 2019).

Table 3.2-8: Annual Operational Emissions

Land Use/Event	Emissions (tons/year)[1,2]					
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Special Events (1,000 Attendees)[3]	0.0	0.0	0.1	0.0	0.1	0.0
Special Events (2,000 Attendees)[3]	0.0	0.1	0.2	0.0	0.1	0.0
Special Events (3,250 Attendees)[3]	0.0	0.0	0.0	0.0	0.0	0.0
Special Events (5,000 Attendees)[3]	0.0	0.0	0.0	0.0	0.0	0.0
Soccer Fields	0.0	0.1	0.3	0.0	0.2	0.0
East & West Park Uses & Buildings	0.0	0.1	0.3	0.0	0.1	0.0
Total:	0.1	0.4	1.0	0.0	0.5	0.0
Industrial Land Uses Removed:	1.1	0.9	2.1	0.0	0.6	0.2
Net Change:	-1.0	-0.5	-1.1	0.0	-0.1	-0.2

1. Emissions were quantified using the CalEEMod, v2016.3.2, computer program. Totals may not sum due to rounding.
2. Mobile-source emissions were quantified based on trip-generation rates obtained from the traffic analysis prepared for this project and default assumptions contained in CalEEMod for Los Angeles County.
3. Assumes 24 days/year for events with a capacity of 1,000 attendees, 26 days/year for events with a capacity of 2,000 attendees, 2 days/year for events with a capacity of 3,250 attendees, and 1 day/year for events with a capacity of 5,000 attendees. Some smaller events may have higher annual emissions than larger events given their increased frequency.

Refer to the Air Quality and Greenhouse Gas Impact Assessment prepared for the proposed Project for emissions modeling assumptions and results (AMBIENT Air Quality & Noise Consulting, 2019).

III(b): Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

According to the SCAQMD, individual projects that would exceed recommended significance thresholds would also be considered to result in a cumulatively considerable increase in emissions for which the basin is designated non-attainment. As noted above, operational emissions associated with the proposed Project would not exceed SCAQMD's recommended significance thresholds. Therefore, impacts would be less than significant.

III(c): Expose sensitive receptors to substantial pollutant concentrations.

Localized Pollutant Concentrations from Onsite Sources

The proposed Project is located in an area with relatively high background pollutant concentrations. Major emission sources in the Project Area include the UP LATC railyard and the Four Commerce Railyards. Background health risk from the UP LATC railyard and the Four Commerce Railyards is estimated to range from 10 and 50 in a million. In 2005, the CARB published the *Air Quality and Land Use Handbook: A Community Health Perspective*, which recommended that sensitive land uses be located approximately 500 feet from major freeways or urban roads having high heavy-duty truck volumes with overall traffic volumes of 100,000 vehicles per day. Major roadways in the Project Area include I-5, I-10, and U.S. 101. The CARB *Air Quality and Land Use Handbook* guidelines would not apply to the proposed Project because overall traffic volumes on the Viaduct and surrounding roadways would not exceed 100,000 vehicles per day, as shown in the EIR prepared for the Viaduct Replacement Project (California Department of Transportation and City of Los Angeles, 2011). Patrons of the park may be exposed to high background pollutant concentrations from nearby existing sources, including vehicle traffic on area roadways. However, the proposed Project would not include the installation of major stationary sources of emissions, nor would the proposed Project generate significant increases in diesel vehicle traffic that would contribute significantly to background pollutant concentrations.

Onsite emission sources associated with the proposed Project would be primarily associated with the operation of natural-gas fired water heaters, which would generate daily emissions of approximately 0.1 lbs/day of NO_x. Emissions of criteria air pollutants from other sources would be negligible. The SCAQMD has developed LSTs for the evaluation of long-term localized air quality impacts. The LSTs are based on CAAQS, which have been established to provide a margin of safety regarding the protection of public health and welfare. For emissions of NO_x, the SCAQMD's minimum LST is 103 lbs/day. Operational emissions would not exceed SCAQMD LSTs. Therefore, impacts related to localized onsite emissions associated with onsite operational activities would be less than significant.

Mobile-Source Carbon Monoxide

CO is the primary criteria air pollutant of local concern associated with the proposed Project. Under specific meteorological and operational conditions, such as near areas of heavily congested vehicle traffic, CO concentrations may reach unhealthy levels. Mobile-source emissions of CO are a direct function of traffic volume, speed, and delay. Under normal meteorological conditions, localized concentrations of CO disperse rapidly with increased distance from the source. For this reason, modeling of mobile-source CO concentrations is typically recommended for sensitive land uses located near signalized roadway

intersections that are projected to operate at unacceptable levels of service (LOS) (i.e., LOS E or F). Localized CO concentrations associated with the proposed Project would be considered a less-than-significant impact if (1) traffic generated by the proposed Project would not result in deterioration of a signalized intersection to a LOS E or F; or (2) the proposed Project would not contribute additional traffic to a signalized intersection that already operates at LOS of E or F.

Based on the *Traffic Impact Analysis* prepared for the proposed Project, existing signalized intersections in the Project Area operate at LOS D, or better (Kimley-Horn and Associates, Inc., 2019a). Under existing-plus-project conditions, signalized intersections primarily affected by the proposed Project would continue to operate at LOS D, or better. Under existing-plus-project event conditions, signalized intersections primarily affected by the proposed Project would also continue to operate at LOS D, or better.

Under future cumulative conditions, the intersections of Alameda Street at Seventh Street, Boyle Avenue at Whittier Boulevard, and Alameda Street at Fourth Street are projected to operate at unacceptable LOS during either AM or PM peak hours. With implementation of the proposed Project, the LOS at these intersections would not change. Furthermore, implementation of the proposed Project would be projected to result in slight improvements in overall volume-to-capacity ratios at these intersections. The proposed Project would not result in a degradation of LOS at primarily affected intersections that are projected to operate at unacceptable levels of service. Therefore, impacts related to the proposed Project's contribution to localized CO concentrations would be less than significant.

III(d): Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

No major sources of odors have been identified in the Project Area. In addition, the proposed Project would not include the installation of any major sources of odors. Therefore, impacts would be less than significant.

3.2.4 Best Management Practices

BMP-AQ-1: SCAQMD Rules and Regulations

The contractor shall implement measures to ensure that all construction activities are consistent with SCAQMD rules and regulations.

BMP-AQ-2: Construction Worker Incentives

The City shall offer ride-share and transit incentives for construction workers to reduce emissions associated with motor vehicle use.

BMP-AQ-3: Construction Equipment Maintenance

The contractor shall maintain construction equipment by conducting regular tune-ups according to the manufacturers' recommendations.

3.2.5 Mitigation Measures

MM-AQ-1: Newer/Tier 4 Engines in Haul Trucks and Construction Equipment

- Include in all construction contracts the requirement to use 2007 and newer diesel haul trucks (e.g., material delivery trucks and soil import/export).
- Include in all construction contracts the requirement that all off-road diesel-fueled construction equipment greater than 50 horsepower shall meet Tier 4 off-road emission standards. In addition, if not already supplied with a factory-equipped diesel particulate filter, all construction equipment shall be outfitted with Best Available Control Technology (BACT) devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. To the extent locally available, construction equipment shall incorporate emissions savings technology such as hybrid drives. In the event that any equipment required under this mitigation measure is not available, provide documentation as information becomes available. A copy of each unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit at the time of mobilization of each applicable unit of equipment shall be provided.
- Maintain construction equipment by conducting regular tune-ups according to the manufacturers' recommendations.
- To the extent possible, the import and export of onsite materials shall be scheduled to minimize empty return trips.

MM-AQ-2: Construction Equipment Requirements

- All on- and off-road diesel-fueled equipment shall not idle for more than 5 minutes when not in use. The idling of diesel-fueled equipment and haul trucks within 1,000 feet of nearby residential land uses shall be prohibited. Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators of the 5-minute-idling limit.
- Staging and queuing areas shall be located at the furthest distance possible from nearby residential land uses.
- Use alternatively fueled (e.g., compressed natural gas, liquefied natural gas, propane), gasoline-fueled, or electrified construction equipment in place of diesel-fueled equipment to the extent locally available.

MM-AQ-3: Fugitive Dust Controls

- All active portions of the construction site shall be watered twice daily to prevent excessive amounts of dust.
- Non-toxic soil stabilizers shall be applied to all inactive construction areas (previously graded areas inactive for 20 days or more, assuming no rain) according to manufacturers' specifications.
- All excavating and grading operations shall be suspended when wind gusts (as instantaneous gust) exceed 25 miles per hour.

- On-site off-road equipment and on-road vehicles used on-site shall be limited to 15 miles per hour.
- All on-site roads shall be paved as soon as feasible, watered twice daily, or chemically stabilized.
- Visible dust beyond the property line which emanates from the project shall be prevented to the maximum extent feasible.
- All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust prior to departing the job site.
- Track-out devices shall be used at all construction site access points.
- All delivery truck tires shall be watered down and/or scraped down prior to departing the job site.
- Streets shall be swept at the end of the day if visible soil material is carried onto adjacent paved public roads and use of SCAQMD Rule 1186 and 1186.1 certified street sweepers or roadway.
- Replace ground cover in disturbed areas as quickly as possible.
- All trucks that are to haul excavated or graded material on-site shall comply with State Vehicle Code Section 23114 (Spilling Loads on Highways), with special attention to Sections 23114(b)(F), (e)(4) as amended, regarding the prevention of such material spilling onto public streets and roads.
- Conduct continuous, direct-reading, near real-time ambient monitoring of PM_{10}. Install appropriate signage and notify the SCAQMD in accordance with Rule 1466, Control of Particulate Emissions from Soils with Toxic Air Contaminants, prior to conducting any earth-moving activities on any site meeting the applicability of the rule.

3.2.6 Significant Unavoidable Adverse Impacts

Because construction of the proposed Project would result in increased NO_x and fugitive dust emissions, the proposed Project would result in significant impacts related to Air Quality. However, with the implementation of **MM-AQ-1** and **MM-AQ-2** and consistency with SCAQMD rules and regulations (**MM-AQ-3**)**,** the proposed Project would not result in significant unavoidable adverse impacts.

3.2.7 Cumulative Impacts

As discussed in Sections 3.2.3.4 and 3.2.3.5, individual projects that would exceed recommended significance thresholds would also be considered to result in a cumulatively considerable increase in emissions for which the basin is designated non-attainment.

As noted in Section 3.2.3.4, maximum-daily construction-generated emissions of NO_x would exceed SCAQMD's recommended significance thresholds. With the implementation of **MM-AQ-1** through **MM-AQ-3**, impacts would be reduced to less than significant. However, construction of the proposed Project could result in a cumulatively considerable net increase of ozone-precursor pollutants for which the region is designated non-attainment, particularly if other projects in the general vicinity of the project site are under construction during the same construction period.

The 670 Mesquite Project may be under construction during the construction of the Project. It was anticipated to commence in 2019 and be completed as early as 2022, or as late as 2040; however, the 670 Mesquite Project has not commenced construction yet. 670 Mesquite would be constructed in one

phase and would increase emissions during construction, as well as potentially increase traffic and therefore increase emissions during the operational phase of the project.

In addition, some portions of the Viaduct Replacement Project may still be under construction during construction of the proposed Project. Construction activities associated with the Viaduct Replacement Project likely to occur during proposed Project construction include construction of the main spans, sidewalks, barriers, and railings, as well as roadway surface demolition and reconstruction. Based on the EIR prepared for the Viaduct Replacement Project, on-site construction emissions associated with these remaining activities would total approximately 15.8 lbs/day of ROG, 124.1 lbs/day of NO_x, 80.4 lbs/day of CO, 6.4 lbs/day of PM_{10}, and 5.7 lbs/day of $PM_{2.5}$ (California Department of Transportation and City of Los Angeles, 2011). Based on these estimates, and assuming that construction of the Viaduct Replacement Project and the proposed Project were to occur simultaneously, on-site emissions would total approximately 18.8 lbs/day of ROG, 137.2 lbs/day of NO_x, 214.6 lbs/day of CO, 13.6 lbs/day of PM_{10}, and 8.5 lbs/day of $PM_{2.5}$ (see **Table 3.2-9**). As indicated in **Table 3.2-9**, total emissions of NO_x would exceed SCAQMD's LST of 108 lbs/day. As a result, a more detailed analysis of localized air quality impacts was warranted.

Table 3.2-9: Cumulative On-Site Construction Emissions

Construction Activity	Emissions (lbs/day)[1]					
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Total Proposed Project Construction Emissions[2]	3.0	13.1	134.2	0.3	7.2	2.8
Viaduct Construction Emissions[4]	15.8	124.1	80.4	-	6.4	5.7
Total Proposed Project and Viaduct Construction Emissions	18.8	137.2	214.6	0.3	13.6	8.5
SCAQMD Localized Significance Thresholds[3]	None	108	827	None	43	10
Proposed Project Construction Emissions Exceeds Thresholds?	-	No	No	-	No	No
Total Proposed Project and Viaduct Project Construction Emissions Exceeds Thresholds?	-	Yes	No	-	No	No

1. Emissions were quantified using the CalEEMod, v2016.3.2 computer program. Includes use of Tier 4 heavy-duty off-road equipment and implementation of dust control measures in compliance with SCAQMD Rule 403. Totals may not sum due to rounding.
2. Maximum daily emissions assume some activities, such as material import and export, could occur simultaneously on any given day.
3. LSTs are based on a two-acre site with sensitive receptors located at 100 meters for PM_{10} and $PM_{2.5}$ and 25 meters for NO_x and CO.
4. Based on emissions estimates derived from the Sixth Street Viaduct Improvement Project Final Environmental Impact Report (2011). Includes construction of main spans, sidewalks, and roadway surface road demolition and reconstruction.

Refer to the Air Quality and Greenhouse Gas Impact Assessment prepared for the proposed Project for emissions modeling assumptions and results (AMBIENT Air Quality & Noise Consulting, 2019).

The analysis of predicted NO_2 concentrations at nearby receptors for the Viaduct Replacement Project was based on maximum daily on-site emissions of 331.9 lbs/day of NO_x, which were estimated to occur during the initial phase of the Viaduct Replacement Project. Subsequent phases of Viaduct construction, including those anticipated to overlap with construction of the proposed Project, were estimated to generate substantially less emissions.

Nonetheless, based on the results of the dispersion modeling conducted for the Viaduct Replacement Project, maximum predicted NO_2 concentrations at nearby land uses, when added to background ambient concentrations, were not found to violate applicable air quality standards. As noted in **Table 3.2-9**, the remaining Viaduct construction activities anticipated to potentially occur during construction of the proposed Project would total approximately 124.1 lbs/day of NO_x. Assuming that both the Viaduct Replacement Project and the proposed Project were to be constructed simultaneously, on-site emissions of NO_x would total 137.2 lbs/day, substantially less than the 331.9 lbs/day analyzed for the Viaduct Replacement Project. To reiterate, the dispersion modeling analysis prepared for the Viaduct Replacement Project, which was based on a much higher mass emissions level of 331.9 lbs/day of NO_x, concluded that localized construction-generated emissions would not exceed applicable ambient air quality standards. As a result, given that emissions for the proposed Project would be substantially less than what was previously analyzed, localized NO_2 concentrations would, likewise, not be anticipated to exceed applicable ambient air quality standards at nearby land uses.

With the implementation of dust control measures in accordance with SCAQMD rules (see **MM-AQ-3** in Section 3.2.5), emissions of PM_{10} and $PM_{2.5}$ are not predicted to exceed applicable standards. Assuming that construction of the remaining Viaduct construction activities and the proposed Project were to occur simultaneously, on-site emissions of PM_{10} and $PM_{2.5}$ would total approximately 13.6 and 8.5 lbs/day, respectively. Total on-site emissions of PM_{10} and $PM_{2.5}$ would not exceed SCAQMD's LSTs of 43 and 10 lbs/day, respectively. Therefore, localized air quality impacts associated with the construction of the proposed Project would be less than significant.

As discussed in Section 3.2.3.5, operational emissions associated with the proposed Project would not exceed SCAQMD's recommended significance thresholds. Therefore, impacts would be less than significant.

The proposed development projects listed in **Table 1-1** would be required to comply with all Federal and State regulations and be consistent with regional policies related to Air Quality, including the FCAA, CCAA, SCAQMD rules and regulations, and RTP/SCS. These projects would also be evaluated based on whether they exceed the SCAQMD's recommended significance thresholds. To reduce impacts related to Air Quality, these projects would be required to develop BMPs and mitigation measures. Therefore, the proposed Project would not result in cumulatively considerable impacts related to Air Quality.

3.3 Biological Resources

The affected environment and regulatory setting for Biological Resources related to the Project Area are described in this section. In addition, this section describes the potential impacts related to Biological Resources that would result from implementation of the proposed Project. As noted in the analysis below, impacts associated with Biological Resources during construction or operation of the proposed Project would be less than significant and no mitigation measures are required.

The information in this section is based on the *Biological Resources Report* (BRR) (GPA Consulting, 2019), the *Sixth Street Viaduct Replacement Project Supplemental Bat Survey Report* (GPA Consulting, 2015b), and the *Sixth Street Viaduct Replacement Project Bat and Nesting Bird Survey Repor*t (GPA Consulting, 2015a). Within this section, special-status species, nesting birds, raptor foraging activities, and bats will be discussed. Special-status species include plants and wildlife species that are listed under the California Department of Fish and Wildlife (CDFW) and the Federal Endangered Species Acts (FESA) (California Department of Fish and Wildlife, 2019); plant species designated by the California Native Plant Society (CNPS) with a California Rare Plant Rank (CRPR) or other plants of local concern (California Native Plant Society, 2019); and wildlife that is designated as a California Species of Special Concern, as defined by CDFW (California Department of Fish and Wildlife, 2019). Biological record searches were reconducted in April 2021.

3.3.1 Regulatory Setting

The following discussion provides a summary of state and federal laws and regulations pertaining to the proposed Project, environmental permits that are required for the proposed Project, and study methods that were undertaken as required by resource agencies and environmental laws.

3.3.1.1 Federal

Clean Water Act

The United States Army Corps of Engineers (USACE) regulates the placement of dredged and fill material into waters of the United States (U.S.), including wetlands, under Section 404 of the Clean Water Act (CWA). No discharge of dredged or fill material into jurisdictional features is permitted unless authorized under an USACE Nationwide Permit or Individual Permit. For all work subject to an USACE Section 404 permit, project proponents must obtain a Water Quality Certification from the applicable RWQCB under CWA Section 401 stating that the project would comply with applicable water quality regulations.

Waters of the United States

The USACE Regulatory Program regulates activities within federal wetlands and waters of the U.S. pursuant to Section 404 of the CWA. Waters of the U.S. are divided into several categories as defined by the Code of Federal Regulations (CFR). Under the CFR (33 CFR 328.3), waters of the U.S. include, but are not limited to:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce (including sightseeing or hunting), including all waters subject to the ebb and flow of the tide;

- All interstate waters including interstate wetlands; and
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats; sand flats; wetlands; sloughs; prairie potholes; wet meadows; playa lakes; or natural ponds where the use, degradation, or destruction of which could affect interstate or foreign commerce. This includes any such waters which are or could be used by interstate or foreign travelers for recreational or other purposes, and from which fish or shellfish could be taken and sold in interstate or foreign commerce, or which are used or could be used for industrial purposes in interstate commerce.

In streams and rivers where adjacent wetlands are absent, the USACE jurisdiction extends to the ordinary high-water mark (OHWM). The OHWM is defined as "the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (33 CFR 328.3[e]). If the OHWM is not readily distinguishable, the USACE jurisdiction within streams extends to the "bankfull discharge" elevation, which is the level at which water begins to leave the channel and move into the floodplain (Rosgen, 1996). This level is reached at a discharge which generally has a recurrence interval of approximately 1.5 to two years on the annual flood series (Leopold, 1994).

In 2015, the USACE and United States Environmental Protection Agency (U.S. EPA) published the Clean Water Rule, which more clearly defined waters of the U.S. The intent of the rule was to make the definition of waters of the U.S. easier to understand, more predictable, and more consistent with current science, while better protecting waters of the U.S. The rule went into effect on August 28, 2015; however, on October 9, 2015, the U.S. Court of Appeals for the Sixth Circuit stayed the Clean Water Rule nationwide pending further action of the court. In response, the USACE and U.S. EPA resumed using the prior regulations defining waters of the U.S. This report uses the current definition of waters of the U.S., provided above. On April 21, 2020, the U.S. EPA and USACE published the Navigable Waters Rule, which re-defined the scope of waters federally regulated under the Clean Water Act (85 FR 22250).

Federal wetlands are transitional areas between well-drained upland habitats and permanently flooded (deepwater) aquatic habitats and are defined differently by different resource agencies. The USACE and the EPA define adjacent wetlands as those areas that either abut a jurisdictional water; are inundated by flooding from a jurisdictional water; are physically separated from a jurisdictional water by a natural berm, bank, dune, or similar natural feature; or are physically separated from a jurisdictional water by an artificial dike, barrier, or similar artificial structure so long as that structure allows for a direct hydrologic surface connection between the wetlands and jurisdiction water in a typical year (33 CFR 328.3[b]).

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) was established in 1973 to provide a framework to conserve and protect endangered and threatened species and their habitat. Section 10 of the FESA allows for the "incidental take" of endangered and threatened wildlife species by non-federal entities. Incidental take is defined by the FESA as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Section 10(a)(1)(B) of the FESA authorizes the taking of federally listed wildlife or fish through an incidental take permit. Section 10(a)(2)(A) of the FESA

requires an applicant for an incidental take permit to submit a conservation plan that specifies, among other things, the impacts likely to result from the taking of the species, and the measures the permit applicant will take to minimize and mitigate impacts on the species. Under FESA designated critical habitat is identified as specific areas containing physical or biological features essential to the existence of endangered or threatened species.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (50 CFR Part 10 and Part 21) protects migratory birds, their occupied nests, and their eggs from disturbance and/or destruction. "Migratory birds" under the MBTA include all bird species listed in 50 CFR Part 10.13, as updated in December 2013 (U.S. Fish and Wildlife Service, 2013). In accordance with the Migratory Bird Treaty Reform Act of 2004, the United States Fish and Wildlife Service (USFWS) included all species native to the United States (or United States territories) that are known to be present as a result of natural biological or ecological processes. In addition, the USFWS provided clarification that the MBTA does not apply to any nonnative species whose presence in the United States is solely the result of intentional or unintentional human-assisted introduction (U.S. Fish and Wildlife Service, 2018). Nonnative bird species not protected by the MBTA include, but are not limited to, the house sparrow (*Passer domesticus*), European starling (*Sturnus vulgaris*), and rock pigeon (*Columba livia*).

3.3.1.2 State

Porter-Cologne Act

The RWQCB also asserts authority over waters of the state under the Porter-Cologne Act, which establishes a regulatory program to protect water quality and to protect beneficial uses of state waters. The Porter-Cologne Act empowers the RWQCB to formulate and adopt a Water Quality Control Plan that designates beneficial uses and establishes water quality objectives that in its judgment would ensure reasonable protection of beneficial uses. Each RWQCB establishes water quality objectives that will ensure the reasonable protection of beneficial uses and the prevention of water quality degradation. Dredge or fill activities with the potential to affect water quality in these waters must comply with Waste Discharge Requirements (WDR) issued by the RWQCB. Waters of the state are defined by the Porter-Cologne Act as any surface or subsurface water or groundwater, including saline waters, within the boundaries of the state.

California Water Code

The term "waters of the state," under jurisdiction of the RWQCB, is defined by California Water Code as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code Section 13050(e)).

Currently, the RWQCB relies upon the definition used in the CWA to define wetlands. However, the State Water Resources Control Board (SWRCB) recently redefined wetlands as part of their *Procedures for Discharges of Dredged or Fill Material to Waters of the State* (State Water Resources Control Board, 2019). The new definition, which was adopted April 2, 2019, is "an area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause

anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation." This report uses the current definition of wetlands.

California Fish and Game Code

Section 1602 of the California Fish and Game Code governs construction activities that substantially divert or obstruct natural stream flow or substantially change the bed, channel, or bank of any river, stream, or lake under the jurisdiction of CDFW. Under the California Fish and Game Code, the limits of CDFW's jurisdiction within streams and other drainages extends from the top of the stream bank to the top of the opposite bank, to the outer drip line in areas containing riparian vegetation, and/or within the 100-year floodplain of a stream or river system containing fish or wildlife resources. Streams are defined in the California Code of Regulations (CCR) (14 CCR Section 1.72) as "a body of water that follows at least periodically or intermittently through a bed or channel having banks and that support fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." Under Section 1602, a Streambed Alteration Agreement must be issued by the CDFW prior to the initiation of construction activities that may substantially divert or obstruct the natural flow of any river, stream, or lake; substantially change or use any material from the bed, channel, or bank, of any river, stream, or lake; or deposit debris, waste, or other materials that could pass into any river, stream, or lake under CDFW's jurisdiction.

The CDFW has jurisdictional authority over waters of the State, including wetlands. In practice, CDFW follows the USFWS' definition of wetlands in Cowardin's *Classification of Wetlands and Deepwater Habitats of the United States*: "Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. For purposes of this classification, wetlands must have one or more of the following three attributes: 1) at least periodically, the land supports hydrophytes; 2) the substrate is predominantly undrained hydric soil; and 3) the substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season of each year" (Cowardin, Carter, Golet, & LaRoe, 1979).

Section 2126 of the California Fish and Game Code states that it is unlawful for any person to take any mammal that is identified in Section 2118, including all species of bats.

Sections 3503, 3513, and 3800 of the California Fish and Game Code prohibits the take of birds protected under the MBTA and protects their occupied nests. In addition, Section 3503.5 of the California Fish and Game Code prohibits the take of any birds in the order Falconiformes or Strigiformes (birds-of-prey) and protects their occupied nests. Pursuant to Section 3801 and 3800, the only species authorized for take without prior authorization from the CDFW is the house sparrow and European starling.

State-listed species and those petitioned for listing by the CDFW are fully protected under the California Endangered Species Act (CESA). Under Section 2081, if a project would result in take of a species that is state-only listed as threatened or endangered, then an incidental take permit from the CDFW is required. However, under Section 2080.1 of the California Fish and Game Code, if a project would result in take of a species that is both federally and state listed, a consistency determination with the findings of the FESA determination may be completed in lieu of undergoing separate consultation.

Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code prohibit the take or possession of 37 fully protected bird, mammal, reptile, amphibian, and fish species. Each of the statutes states that

no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to "take" the species, and states that no previously issued permit or licenses for take of the species "shall have any force or effect" for authorizing take or possession. The CDFW will not authorize incidental take of fully protected species when activities are proposed in areas inhabited by those species.

3.3.1.3 Local

City of Los Angeles

Every county and city is required by California State Law to adopt a General Plan. The City of Los Angeles General Plan (General Plan) is a document that has several elements which consist of the plans for the City's 35 Community Plan Areas. The General Plan was approved by the City Planning Commission in July 1995 and adopted by the City Council in December 1996 (City of Los Angeles, 2019).

Conservation Element

The Conservation Element of the General Plan addresses conservation, protection, development, utilization, and reclamation of natural resources (City of Los Angeles, 2001). The Conservation Element includes the following goals, objectives, and policies that are relevant to the proposed Project:

Goals

- A city that preserves, protects, and enhances its existing natural and related resources.

Objectives

- Protect and promote restoration, to the greatest extent practical, of sensitive plant and animal species and their habitats; and
- Preserve, protect, restore and enhance natural plant and wildlife diversity, habitats, corridors and linkages so as to enable the healthy propagation and survival of native species, especially those species that are endangered, sensitive, threatened or species of special concern.

Policies

- Continue to require evaluation, avoidance, and minimization of potential significant impacts, as well as mitigation of unavoidable significant impacts on sensitive animal and plant species and their habitats and habitat corridors relative to land development activities;
- Continue to administer city-owned and managed properties so as to protect and/or enhance the survival of sensitive plant and animal species to the greatest practical extent;
- Continue to support legislation that encourages and facilitates protection of endangered, threatened, sensitive and rare species and their habitats and habitats and habitat corridors;
- Continue to identify significant habitat areas, corridors and buffer and to take measures to protect, enhance and/or restore them;
- Continue to protect, restore and/or enhance habitat areas, linkages and corridor segments, to the greatest extent practical, within city owned or managed sites;
- Continue to work cooperatively with other agencies and entities in protecting local habitats and endangered, threatened, sensitive and rare species; and,

- Continue to support legislation that encourages and facilitates protection of local native plant and animal habitats.

3.3.2 Environmental Setting

This section describes the environmental setting or conditions related to Biological Resources and jurisdictional areas within the Project Area. This information is intended to assist in the evaluation and conclusions of the impact analysis provided below and in the formation of BMPs.

As noted in the BRR, two bat surveys were completed in 2015 for the Sixth Street Viaduct Replacement Project (Viaduct Replacement Project), and a site visit was completed for the proposed Project on November 7, 2017, to assess current conditions.

3.3.2.1 Vegetation/Land Use Types

The Project Area is located under and adjacent to the Viaduct Replacement Project area. The Project Area is surrounded by industrial and commercial land uses. The vegetation surrounding the Project Area is mostly comprised of ornamental and weedy plant species.

3.3.2.2 Plants

During the site visit, non-native weedy species were observed in and around the Project Area in disturbed areas, including tree tobacco (*Nicotiana glauca*), Mexican fan palm (*Washingtonia robusta*), crimson fountain grass (*Pennisetum setaceum*), and other herbaceous plants and grasses. There are no natural vegetation communities in the Project Area.

3.3.2.3 Wildlife

Several wildlife species were observed within the Project Area in the 2015 pre-construction surveys for the Viaduct Replacement Project and subsequent construction monitoring surveys, including two bat species and eighteen bird species. The bat species recorded were Yuma myotis (*Myotis yumanensis*) and Mexican free-tailed bat (*Tadarida brasiliensis*). The bird species observed were barn swallow (*Hirundo rustica*), cliff swallow (*Petrochelidon pyrrhonota*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), red-tailed hawk (*Buteo jamaicensis*), osprey (*Pandion haliaetus*), northern rough-winged swallow (*Stelgidopteryx serripennis*), black necked stilt (*Himantopus mexicanus*), least sandpiper (*Calidris minutilla*), Canada goose (*Branta canadensis*), mallard duck (*Anas platyrhynchos*), great egret (*Ardea alba*), snowy egret (*Egretta thula*), black phoebe (*Sayornis nigricans*), killdeer (*Charadrius vociferous*), great blue heron (*Ardea herodias*), California gull (*Larus californicus*), and rock pigeon. However, due to the level of disturbance and extremely limited amount of vegetated areas, the biological diversity of animals within the Project Area and surrounding areas is low.

3.3.2.4 Federal and State Jurisdictional Aquatic Resources

The Los Angeles River (LA River) is under jurisdiction of the USACE and RWQCB and is designated as waters of the United States and the State. The LA River is also under CDFW jurisdiction. The jurisdiction of the CDFW includes the LA River from the top of the east bank to the top of the west bank. There is no riparian corridor associated with the LA River in the Project Area and there are no existing wetlands in the Project Area.

3.3.2.5 Special-Status Species

Special-status species are plants and animals that are legally protected under the FESA, the CESA, or other regulations, as well as species considered sufficiently rare by the scientific community to qualify for such listing. A list of special-status species, their critical habitats, and sensitive vegetation communities with the potential to be in the Project Area based on geographical location was obtained using the California Natural Diversity Database (CNDDB). A list of special-status plants was obtained from the California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants of California, which was developed and is maintained by the CNPS Rare Plant Program. A list of special-status species with potential to be in the Project Area based on geographical location was obtained using the USFWS Information for Planning and Conservation (IPaC) System (U.S. Fish and Wildlife Service, 2019). A list of special-status fish species with the potential to be in the Project Area based on geographical location was obtained using the National Marine Fisheries Service (NMFS) California Species List Tool (National Marine Fisheries Service, 2019). The CNDDB, CNPS, USFWS IPaC, and NMFS species lists are included in the BRR prepared for the proposed Project (GPA Consulting, 2019). Biological record searches were reconducted in April 2021.

Special-Status Plants and Sensitive Vegetation Communities

A total of 33 special-status plant species were evaluated for their potential to be within the Project Area, eight of which are identified as federally and/or state threatened and endangered plant species. Survey results, range, and habitat information was used to determine the likelihood for these species to be within the Project Area. Special-status plant species were not observed; therefore, special-status plant species are not anticipated to be in the Project Area.

According to the USFWS, there are no USFWS-designated critical habitats found within the Project Area.

According to the CNDDB search, three sensitive vegetation communities have the potential to be within the Project Area. These sensitive vegetation communities include California Walnut Woodland, Southern Sycamore Alder Riparian Woodlands, and Walnut Forest. None of the sensitive communities were observed, or have the potential to be, within the Project Area.

Special-Status Wildlife

A total of 22 special-status wildlife species were evaluated for their potential to be within the Project Area. Six of which are identified as federally and/or state threatened and endangered wildlife species. Survey results, range, and habitat information was used to determine the likelihood for these species to be within the Project Area. Because the entire Project Area lacks suitable habitat, is disturbed, and is surrounded by industrial and commercial land uses, most of these wildlife species are not anticipated to be in the Project Area. However, the Yuma myotis, a state Species of Special Concern, was recorded in the Project Area during the 2015 Viaduct Replacement Project survey and has a potential to roost or forage in the project area. Bridges and other structures within the project area would provide roosting and nesting habitat for special-status birds and bats. The LA River and other open areas provide foraging habitat for special-status osprey, great egret, and snowy egret. Special-status wildlife such as Yuma myotis, osprey, great egret, and snowy egret have the potential to be within the vicinity of the Project Area.

No USFWS-designated critical habitat for federally threatened and/or endangered wildlife species is designated in the Project Area, and there is no essential fish habitat known to be in the Project Area.

3.3.2.6 Bats

The Fourth Street Bridge and the Seventh Street Bridge contain suitable habitat for bat roosting. As a component of The Sixth Street Viaduct Replacement Project, permanent bat design features will be constructed on the new Sixth Street Viaduct with over the LA River. These habitat features may be occupied by bats prior to the implementation of this proposed Project. Therefore, this EIR also evaluates the potential for bats to be in the newly placed permanent bat design features and any new buildings that provide roosting habitat.

Two bat species, Yuma myotis and the Mexican free-tailed bat, were detected in the Project Area during the bat surveys conducted for the Viaduct Replacement Project in May of 2015, and bats have been detected during subsequent monitoring of the Fourth Street Viaduct. Other special-status bats also have potential to be in the Project Area.

3.3.2.7 Birds

Nesting Birds

The Project Area contains limited suitable nesting habitat for nesting birds, since the entire Project Area is disturbed and is surrounded by industrial and commercial land uses. There is suitable nesting habitat in the Project Area for bird species that frequently nest in and on structures, trees, or other vegetation in developed areas, and are tolerant of disturbance. Several bird species including barn swallows, cliff swallows, American crows, common ravens, and rock pigeons were observed nesting on the Sixth Street Viaduct during a May 2015 survey (GPA Consulting, 2015a).

Raptor Foraging Activities

The Project Area was evaluated for its potential to support raptor foraging activities. Raptors could nest within the Project Area; however, there is limited open area and the foraging habitat is low quality. The Project Area provides limited foraging opportunities for raptor species that are habituated to developed areas.

3.3.2.8 Wildlife Corridors

According to the CDFW Biogeographic Information and Observation System (BIOS), there are no essential wildlife connectivity areas found within the Project Area (California Department of Fish and Wildlife, 2018). The Project Area is within a developed area with minimal habitat for wildlife and is not likely used as a wildlife corridor. However, the Project Area may be used for local foraging and movement by local wildlife species from the surrounding areas.

3.3.3 Environmental Impact Analysis

3.3.3.1 Methodology

Potential significant impacts associated with the proposed Project were gathered from the BRR (October 2019). This report presented findings, conclusions, and recommendations concerning the proposed

Project. The results were based on an analysis of the existing biological resources and jurisdictional areas contained within the Project Area which could be affected by the proposed Project during construction and operation.

Direct impacts result when sensitive biological resources are altered by project implementation, such as through vegetation removal, habitat modifications, and injury or death of wildlife species. Indirect impacts may result from elevated levels of noise or lighting, changes in surface water hydrology, or increased erosion or sedimentation. These types of indirect impacts can affect vegetation communities or their potential use by sensitive wildlife species.

The discussion below identifies potential impacts resulting from the proposed Project, and the BMPs that would be required to reduce impact levels to less than significant.

3.3.3.2 Screening Analysis

Several impacts and corresponding thresholds of significance in the following section were eliminated from further analysis in this EIR. Topics were eliminated if the Initial Study for the proposed Project concluded there would be "No Impact," or if impacts were identified to be "Less Than Significant… and will not be discussed further in the EIR." Therefore, only the topics described in the section below were determined to require further analysis in this EIR. A copy of the Initial Study, which contains the eliminated topics, is provided in **Appendix A**.

3.3.3.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and the *L.A. CEQA Thresholds Guide*, the proposed Project would have a significant impact on Biological Resources if it would:

IV(a) 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.

IV(c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marshes, vernal pools, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

3.3.3.4 Construction Impacts

IV(a): Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

The analysis below addresses potential impacts on biological resources including FESA and CESA species, related to the temporary and short-term, direct and indirect impacts on sensitive biological resources anticipated during construction of the proposed Project. As noted below, the proposed Project would result in less than significant impacts on vegetation, wildlife, and special-status plants or wildlife; therefore, no mitigation is required.

Special-Status Plants

Special-status plants species are not expected to be in the Project Area; therefore, mitigation measures are not required.

Special-Status Wildlife

Bats and birds are known to use the bridges over the LA River for roosting and nesting, and raptors could forage in the area. Removal of habitat and increased noise, vibration, night lighting, carbon dioxide, and human activity could impact special-status wildlife, including but not limited to, Yuma myotis, osprey, great egret, and snowy egret. Special-status wildlife could be nesting or roosting with in the Project Area. However, the following BMPs would be implemented to reduce construction-related impacts on wildlife (see Section 3.3.4 and 3.3.5 for additional information):

- Pre-construction wildlife surveys would be completed by a qualified biologist.
- All trash and construction debris would be removed from the LA River on a daily basis.
- No work for the proposed Project would be conducted on or under the Fourth Street Bridge or Seventh Street Bridge structures.
- The LA River Access Tunnel would be surveyed by a qualified biologist to assess the presence of bats or potential bat-roosting habitat. If bats or bat-roosting in the tunnel are identified, then during the non-breeding and active season (typically October), bats would be safely evicted, to the extent feasible, under the direction of a qualified biologist. Once it has been determined that all roosting bats have been safely evicted from roosting cavities, exclusionary devices would be installed and maintained where appropriate to prevent bats from roosting in these cavities prior to construction.
- In the event that a maternal colony of bats is found, no work would be conducted within 100 feet of the maternal roosting site until the maternal season is over or the bats have left the site, or as otherwise directed by a qualified biologist. The site would be designated as a sensitive area and protected as such until the bats have left the site. No activities would be authorized adjacent to the roosting site. Combustion equipment, such as generators, pumps, and vehicles, would not to be parked nor operated under or adjacent to the roosting site. Construction personnel would not be authorized to enter areas beneath the colony, especially during the evening exodus.
- Work on existing structures for the proposed Project (e.g. the LA River Access Tunnel), or within 100 feet of the Sixth Street Viaduct, would be conducted outside of the bat maternity season (typically April-September), if feasible.
- In the event that all bats are not able to be excluded from affected roosting habitat, a qualified biologist would monitor LA River Access Tunnel alterations and tree removals. If bats are disturbed, work would be safely suspended until all bats leave the vicinity on their own, or alternative measures can be identified under the direction of a qualified biologist. Work would resume only once the bats have left the site and/or approval to resume work is given by a qualified biologist.
- If vegetation trimming or clearing is conducted during the nesting season (typically February 15 through September 15), a qualified biologist would conduct a nesting bird survey.

- For construction required during the bird nesting season, for birds protected under the MBTA and California Fish and Game Code Sections, nesting bird surveys would be completed no more than 48 hours prior to construction activities to determine if nesting birds/raptors or active nests are within 300 feet (500 feet for potential raptor nests) of the project area. Surveys would be repeated if construction activities are suspended for five days or more.

With implementation of these BMPs, impacts on wildlife would be less than significant, and mitigation is not required.

IV(c): Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

The proposed Project would include changes to the LA River concrete lining and banks outside of the OHWM, which would include terracing and concrete planters. The LA River is under jurisdiction of the Regional Water Quality Control Board as waters of the State. The LA River is also under jurisdiction of the California Department of Fish and Wildlife (CDFW). A WDR from the RWQCB, and California Fish and Game Code Section 1602 Streambed Alteration Agreement would be required for temporary activities and fill. In addition, the following BMPs would be implemented to avoid impacts by staying out of the OHWM. (see Section 3.3.4 for additional information):

- All trash and construction debris would be removed from the LA River construction areas on a daily basis;
- Appropriate hazardous material BMPs would be implemented to reduce the potential for chemical spills or contaminant releases into the LA River, including any non-stormwater discharge; and
- All equipment refueling and maintenance would be conducted in the staging area, which would be confined to the proposed Project Site in areas outside of the LA River.

With implementation of these BMPs, impacts on aquatic resources would be less than significant, and no mitigation is required.

3.3.3.5 Operational Impacts

IV(a): Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW, USFWS, or NOAA Fisheries?

The analysis below addresses potential impacts on biological resources including CESA and FESA species, related to the permanent and long-term, direct, and indirect impacts on sensitive biological resources anticipated during operation of the proposed Project. As noted below, no impacts on vegetation, wildlife, and special-status plants or wildlife would occur; therefore, no mitigation is required. In addition, the proposed Project would result in less than significant impacts on bats, nesting birds, and raptor foraging habitat, and no mitigation is required.

Special-Status Plants

Special-status plants species are not expected to be in the Project Area; therefore, there would be no impact on special-status plant species and mitigation is not required.

Special-Status Wildlife

Increased lighting, noise, human activity, and regular maintenance of vegetated areas to the Project Area could result in minor impacts on special-status wildlife, including bats, birds, and raptors; however, because there is already a high level of human activity, night lighting, and noise in the Project Area, the proposed Project would not be expected to deter wildlife from using existing habitat. In addition, the terracing within the LA Riverbank with vegetated planters, buildings, meadow, and a nature walk path are anticipated to include trees, and other natural and artificial substrates that would potentially create additional nesting and roosting habitat for special-status birds and bats. Therefore, impacts on special-status wildlife would be less than significant, and mitigation is not required.

IV(c): Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

There are no wetlands in the Project Area; therefore, there would be no operational impacts on wetlands. The proposed Project would include permanent changes to the LA River concrete lining and banks, which may include terracing and concrete planters. The LA River is currently concrete lined, and the addition of these features would not result in a substantial change to the ecological function of the LA River. Therefore, impacts on jurisdictional resources would be less than significant, and mitigation is not required. A WDR from the RWQCB and California Fish and Game Code Section 1602 Streambed Alteration Agreement would be required for permanent fill in the LA River.

3.3.4 Best Management Practices

Impacts on Biological Resources would be avoided or minimized by implementing the following BMPs, which are subject to applicable regulatory agency approval:

BMP-BIO-1: Pre-Construction Wildlife Surveys

Pre-construction wildlife surveys shall be completed by a qualified biologist no more than 48 hours prior to clearing, grubbing, or other construction activities to determine the presence/absence of wildlife species, including special-status species, within 100 feet of the construction area. Special attention will be focused on any existing burrowing, roosting, and nesting habitat within the Project Area. Surveys shall be repeated if construction activities are suspended for five days or more. If any wildlife species are identified, appropriate BMPs shall be developed and implemented to reduce potential impacts on these species, in consultation with regulatory agencies where appropriate.

BMP-BIO-2: Trash and Construction Debris Removal

All trash and construction debris shall be removed from the LA River construction areas on a daily basis. All water quality BMP materials shall be properly maintained during project construction and removed upon completion of construction activities. After completion of proposed construction activities, all construction equipment and materials shall be removed from the Project Area, and the Project Area shall be returned to pre-project conditions.

BMP-BIO-3: Work Area Limitations

No work for the proposed Project shall be conducted on the Fourth Street Bridge or Seventh Street Bridge structures.

BMP-BIO-4: Nesting Bird Survey

If vegetation trimming or clearing is conducted during the nesting season (typically February 15 through September 15), nesting bird surveys shall be completed by a qualified biologist within 300 feet of potential bird-nesting areas and 500 feet of potential raptor-nesting areas no more than 48 hours prior to trimming/removal activities to determine if nesting birds are within the affected vegetation. Surveys shall be repeated if trimming or removal activities are suspended for five days or more.

BMP-BIO-5: Nesting Bird Buffer

If nesting birds protected under the MBTA and California Fish and Game Code Sections are found in the Project Area, appropriate buffer consisting of orange flagging/fencing or similar (typically up to 300 feet for songbirds and 500 feet for raptors shall be installed and maintained until nesting activity has ended, as determined in coordination with the project biologist and regulatory agencies, as appropriate, to ensure that nesting birds and active nests are not harmed.

BMP-BIO-6: Hazardous Material BMPs

Appropriate hazardous material BMPs shall be implemented to reduce the potential for chemical spills or contaminant releases into the LA River, including any non-stormwater discharge.

BMP-BIO-7: Equipment Maintenance

All equipment refueling and maintenance shall be conducted in the staging area. In addition, vehicles and equipment shall be checked daily for fluid and fuel leaks, and drip pans shall be placed under all equipment that is parked and not in operation.

BMP-BIO-8: Regulatory Permits

The City shall consult with the appropriate responsible resource agency (e.g., CDFW and RWQCB) to determine permanent and temporary impact areas. Prior to undertaking ground-disturbing activities within or immediately adjacent to any aquatic resource areas, the City and/or their consultant shall obtain a CWA Section 401 Water Quality Certification, and California Fish and Game Code Section 1602 Streambed Alteration Agreement.

BMP-BIO-9: Pre-Construction Bat Surveys

At least 30 days prior to construction, alterations to the LA River Access Tunnel shall be surveyed by a qualified biologist to assess the presence of bats or potential bat-roosting cavities. If bats or bat-roosting cavities are identified, then during the non-breeding and active season (typically October), bats shall be safely evicted, to the extent feasible, under the direction of a qualified biologist. Once it has been determined that all roosting bats have been safely evicted from roosting cavities, exclusionary devices shall be installed and maintained where appropriate to prevent bats from roosting in these cavities prior to construction.

BMP-BIO-10: Monitoring During LA River Access Tunnel Alteration

In the event that all bats are not able to be excluded from affected roosting habitat, a qualified biologist shall monitor LA River Access Tunnel alterations. If bats are disturbed, work shall be safely suspended until all bats leave the vicinity on their own, or alternative measures can be identified under the direction of a qualified biologist. Work shall resume only once the bats have left the site and/or approval to resume work is given by a qualified biologist.

BMP-BIO-11: Bat Monitoring

In the event that all bats are not able to be excluded from affected roosting habitat, a qualified biologist shall monitor structure alteration activities. If bats are disturbed, work shall be safely suspended until all bats leave the vicinity of the LA River Access Tunnel on their own, or alternative measures shall be identified under the direction of a qualified biologist. Work shall resume only once the bats have left the site and/or approval to resume work is given by a qualified biologist.

Surveys and exclusion measures are expected to prevent maternal colonies from becoming established in structures to be removed or altered. In the event that a maternal colony of bats is found, no work shall be conducted within 100 feet of the maternal roosting site until the maternal season is over or the bats have left the site, or as otherwise directed by a qualified biologist. The site shall be designated as a sensitive area and protected as such until the bats have left the site. No activities shall be authorized adjacent to the roosting site. Combustion equipment, such as generators, pumps, and vehicles, shall not be parked or operated under or adjacent to the roosting site. Construction personnel shall not be authorized to enter areas beneath the colony, especially during the evening exodus.

3.3.5 Mitigation Measures

Impacts on Biological Resources would be less than significant; therefore, mitigation measures are not required.

3.3.6 Significant Unavoidable Adverse Impacts

There are no significant unavoidable adverse impacts on Biological Resources resulting from construction and operation of the proposed Project.

3.3.7 Cumulative Impacts

Biological Resources in the Project Area have been removed or extrapolated due to urbanization and the Project Area is located under and adjacent to the Viaduct Replacement Project area, which is currently an active construction site. Project level impacts on Biological Resources are not likely to result in or have significant cumulative impacts on Biological Resources in relation to other projects in the vicinity of the proposed Project. With implementation of the BMPs described in Section 3.3.4, the proposed Project is not expected to result in significant impacts on Biological Resources. In addition, other projects in the vicinity of the proposed Project (see **Table 1-1**) would be required to comply with all federal and state regulations and be consistent with local policies related to Biological Resources, and to develop BMPs and mitigation measures. Therefore, the proposed Project would not result in cumulatively considerable impacts related to Biological Resources.

3.4 Cultural Resources

This section identifies known cultural resources, including archaeological, tribal cultural resources, and historical, present within the Project Area, evaluates the potential project-related impacts on those resources; and provides mitigation measures, as applicable. The identification of impacts to cultural resources was conducted under the provisions of Section 15064.5 of the California Environmental Quality Act (CEQA) Guidelines. The environmental setting and analysis in this section rely on information from the Project's Historical Resources Evaluation Report (GPA Consulting, 2019) and the Archaeological Assessment (Applied EarthWorks, 2019).

As noted in the analysis below, direct and indirect impacts associated with cultural resources during construction and operation would be less than significant and no mitigation measures are required.

3.4.1 Regulatory Setting

Cultural resources fall within the jurisdiction of several levels of government. Federal, state, and local jurisdictions provide the framework for the identification, documentation, and protection of such resources. As described below, the National Historic Preservation Act (NHPA), California Environmental Quality Act (CEQA), and City of Los Angeles Cultural Heritage Ordinance (Los Angeles Administrative Code Section 22.171) are the primary laws applicable to the proposed Project that govern and affect the preservation of cultural resources of national, state, and local levels of government.

3.4.1.1 Federal

National Historic Preservation Act

The NHPA of 1966, as amended, sets forth national policy and procedures for historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for listing in the National Register of Historic Places (National Register). Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and to allow the Advisory Council on Historic Preservation (ACHP) the opportunity to comment on those undertakings, following regulations issued by the ACHP (36 CFR Part 800).

National Register of Historic Places

The National Register is "an authoritative guide to be used by federal, state, and local governments, private groups, and citizens to identify the nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment (Title 36 Code of Federal Regulations Part 60.2)." The National Register recognizes properties that are significant at the national, state, and/or local levels.

Criteria

To be eligible for listing in the National Register, a property must be at least 50 years of age (unless the property is of "exceptional importance") and possess significance in American history and culture, architecture, or archaeology. A property of potential significance must meet one or more of the following four established criteria (Title 36 Code of Federal Regulations Part 60.4):

A. Associated with events that have made a significant contribution to the broad patterns of our history;

B. Associated with the lives of persons significant in our past;

C. Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. Yield, or may be likely to yield, information important in prehistory or history.

Context

To be eligible for listing in the National Register, a property must be significant within a historic context. *National Register Bulletin #15* states that the significance of a historic property can be judged only when it is evaluated within its historic context. Historic contexts are "those patterns, themes, or trends in history by which a specific...property or site is understood and its meaning...is made clear" (National Park Service, 1990). A property must represent an important aspect of the area's history or prehistory and possess the requisite integrity to qualify for the National Register.

Integrity

In addition to possessing significance within a historic context, to be eligible for listing in the National Register a property must have integrity. Integrity is defined in *National Register Bulletin #15* as "the ability of a property to convey its significance" (National Park Service, 1990). Within the concept of integrity, the National Register recognizes the following seven aspects or qualities that in various combinations define integrity: feeling, association, workmanship, location, design, setting, and materials. Integrity is based on significance: why, where, and when a property is important. Thus, the significance of the property must be fully established before the integrity is analyzed.

3.4.1.2 State

California Environmental Quality Act

CEQA requires the consideration of historical resources and tribal cultural resources, as well as "unique" archaeological resources. For the purposes of CEQA, a historical resource is a cultural resource listed in, or determined eligible for listing in, the California Register of Historical Resources (CRHR) (Public Resources Code [PRC] Section 21084.1). Properties listed in, or formally determined eligible for listing in, the NRHP are automatically listed in the CRHR (14 California Code of Regulations Section 4851 [a][1]). Therefore, cultural resources that are "historic properties" under the NHPA are also "historical resources" under CEQA. In addition, cultural resources included in a local register of historical resources or identified as significant in a qualified historical resource survey are also presumed to be historical resources for CEQA.

In 2014, Assembly Bill 52 (AB 52) added the term "tribal cultural resources" to CEQA, and AB 52 is commonly referenced instead of CEQA when discussing the process to identify tribal cultural resources (as well as identifying measures to avoid, preserve, or mitigate effects to them). Defined in PRC Section 21074(a), a tribal cultural resource is a CRHR or local register eligible site, feature, place, cultural landscape, or object which has a cultural value to a California Native American tribe. Tribal

cultural resources must also meet the definition of a historical resource. Unique archaeological resources are referenced in PRC Section 21083.2.

California Register of Historical Resources

The California Register is an authoritative guide used by state and local agencies, private groups, and citizens to identify historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse impacts (PRC Section 5024.1[a]).

The California Register consists of properties that are listed automatically as well as those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed in the National Register and those formally Determined Eligible for the National Register;
- State Historical Landmarks from No. 0770 onward; and
- Those California Points of Historical Interest that have been evaluated by the State Office of Historic Preservation (SOHP) and have been recommended to the State Historical Resources Commission for inclusion on the California Register (PRC Section 5024.1[d]).

Criteria and Integrity

For those properties not automatically listed, the criteria for eligibility of listing in the California Register are based upon National Register criteria, but are identified as 1-4 instead of A-D. To be eligible for listing in the California Register, a property generally must be at least 50 years of age and must possess significance at the local, state, or national level, under one or more of the following four criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or
2. It is associated with the lives of persons important to local, California, or national history; or
3. It embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values; or
4. It has yielded, or has the potential to yield, information important in the prehistory or history of the local area, California, or the nation.

Properties eligible for listing in the California Register may include buildings, sites, structures, objects, and historic districts. A property less than 50 years of age may be eligible if it can be demonstrated that sufficient time has passed to understand its historical importance. While the enabling legislation for the California Register is less rigorous with regard to the issue of integrity, there is the expectation that properties reflect their appearance during their period of significance (PRC Section 4852).

The California Register may also include properties identified during historic resource surveys. However, the survey must meet all of the following criteria (PRC Section 5024.1):

1. The survey has been or will be included in the State Historic Resources Inventory;
2. The survey and the survey documentation were prepared in accordance with office [SOHP] procedures and requirements;
3. The resource is evaluated and determined by the office [SOHP] to have a significance rating of Category 1 to 5 on a DPR Form 523; and
4. If the survey is five or more years old at the time of its nomination for inclusion in the California Register, the survey is updated to identify historical resources that have become eligible or ineligible due to changed circumstances or further documentation and those that have been demolished or altered in a manner that substantially diminishes the significance of the resource.

State Health and Safety Code, Section 7050.5/California Public Resources Code, Section 5097.9

State Health and Safety Code (HSC) Section 7050.5 and PRC Section 5097.9 contain provisions for the treatment of human remains contained in archaeological sites. Under HSC Section 7050.5, if human remains are discovered during any project activity, the county coroner must be notified immediately. If human remains are exposed, HSC Section 7050.5 states that no further disturbance shall occur until the county coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. Construction must halt in the area of the discovery of human remains, the area of the discovery shall be protected, and consultation and treatment shall occur as prescribed by law. If the remains are determined by the coroner to be Native American, the coroner is responsible for contacting the Native American Heritage Commission (NAHC) within 24 hours.

NAHC, pursuant to PRC Section 5097.98, will immediately notify those persons it believes to be most likely descended from the deceased person so they can inspect the burial site and make recommendations for treatment or disposal.

3.4.1.3 Local

City of Los Angeles Cultural Heritage Ordinance

The Los Angeles City Council adopted the Cultural Heritage Ordinance in 1962 and amended it in 2007 (Sections 22.171 et seq. of the Administrative Code). The Ordinance created a Cultural Heritage Commission and criteria for designating Historic-Cultural Monuments (HCM). The Commission is comprised of five citizens, appointed by the Mayor, who have exhibited knowledge of Los Angeles history, culture, and architecture. The four criteria for HCM designation are stated below:

1. The proposed HCM reflects the broad cultural, economic, or social history of the nation, state or community; or
2. The proposed HCM is identified with historic personages or with important events in the main currents of national, state, or local history; or
3. The proposed HCM embodies the characteristics of an architectural type specimen inherently valuable for a study of a period, style, or method of construction; or

4. The proposed HCM is the notable work of a master builder, designer, or architect whose individual genius influenced his or her age (Los Angeles Administrative Code Section 22.171.7).

Unlike the National and California Registers, the Ordinance makes no mention of concepts such as physical integrity or period of significance. Moreover, properties do not have to reach a minimum age requirement, such as 50 years, to be designated as HCMs.

City of Los Angeles Conservation Element

The Conservation Element of the City of Los Angeles General Plan (adopted September 2001) primarily addresses preservation, conservation, protection, and enhancement of the city's natural resources. The Conservation Element specifically addresses archaeological resources in Section 3 of Chapter 2. Cultural and historical resources are addressed in Section 5 of the same chapter.

With regard to archaeological resources, the Conservation Element contains the following objective with an associated policy and program:

- **Objective:** protect the city's archaeological and paleontological resources for historical, cultural, research and/or educational purposes.
- **Policy:** continue to identify and protect significant archaeological and paleontological sites and/or resources known to exist or that are identified during land development, demolition, or property modification activities.
- **Program:** permit processing, monitoring, enforcement, and periodic revision of regulations and procedures.
- **Responsibility:** departments of Building and Safety, City Planning and Cultural Affairs, and/or the lead agency responsible for project implementation.

The Conservation element also includes the following objective, policy, and programs for cultural and historic resources:

- **Objective:** protect important cultural and historical sites and resources for historical, cultural, research, and community educational purposes.
- **Policy:** continue to protect historic and cultural sites and/or resources potentially affected by proposed land development, demolition, or property modification activities.
- **Program 1:** development permit processing, monitoring, enforcement and periodic revision of regulations and procedures.
- **Responsibility:** departments of Building and Safety, City Planning, Cultural Affairs and Community Redevelopment Agency and/or the lead agency responsible for project implementation.
- **Program 2:** prepare the Historic Preservation and Cultural Resources Element of the general plan.
- **Responsibility:** departments of City Planning and Cultural Affairs.
- **Program 3:** continue to survey buildings and structures of any age in neighborhoods throughout the city in order to develop a record that can be used in the present and future for evaluating their

historic and cultural value as individual structures and within the context of surrounding structures.

- **Responsibility**: departments of Building and Safety, City Planning, and Cultural Affairs and the Community Redevelopment Agency.

3.4.2 Environmental Setting

The Project Area is a fully developed, mixed-use urban setting, bisected by the channelized Los Angeles River (see **Figure 2-2**, Project Area). Land uses along the east and west sides of the River are predominantly industrial and commercial. The built environment in the vicinity of the Project Area is characterized by the width of the streets and their grid-like arrangement; railroad rights-of-way and the placement of spur tracks to the rear of parcels; the size of parcels and the corresponding footprint and height of the buildings erected; extensive surface parking areas, often designed to accommodate large trucks; evidence of former rail lines (such as remnant tracks and a rail stop); remnant granite infrastructure (including curbs, swales, and rail beds); and the lack of street trees or other landscaping. The area is characterized by industrial building types that vary widely in size, from modest industrial buildings to massive warehouses spanning full city blocks. Buildings in the area were constructed primarily between 1900 and 1940 and are predominantly vernacular or utilitarian in form and style.

Railroad corridors exist along the east and west banks of the LA River. The Los Angeles River is contained within a trapezoidal concrete-lined channel. There are two extant bridges within the Project Area: the Fourth Street Viaduct (Bridge No. 53C0044) and the Seventh Street Viaduct (Bridge No. 53C1321). The Fourth Street Viaduct is a concrete arch bridge over the Los Angeles River, located along Fourth Street. The Seventh Street Viaduct is a reinforced concrete arch bridge is located along Seventh Street over the Los Angeles River. The Sixth Street Viaduct Replacement is currently under construction within the Project Area.

3.4.2.1 Geological Setting

The Project Area is generally situated within a broad valley of the Los Angeles Basin. This broad, level expanse of land comprises more than 800 square miles extending from Cahuenga Peak southward to the Pacific Coast, and from the Topanga Canyon southeast to the vicinity of Aliso Creek. The Los Angeles Basin is traversed by several large watercourses. The Project Area is surrounded by the Santa Monica Mountains to the northwest and north; the San Gabriel Mountains to the north and northeast; and the Baldwin Hills to the south. The soils are alluvium and colluvium underlain by Miocene marine sedimentary deposits. Geological faulting and folding of the crust in the area have trapped oil deposits beneath the surface (Mayuga, M.N., 1970). The geologic formation underlying the Project Area is tentatively identified as sand, silt, and gravel as well as alluvial fans and streambeds.

3.4.2.2 Prehistoric Background

The sediments and soils within the Project Area date from periods ranging from Holocene to Late Pleistocene. Within the Project Area, most deposits are derived from the Los Angeles River and are unlikely to preserve fossil material because of their recent nature. Remnants of Valley Grassland and Coastal Sage-Scrub zones cover much of the Los Angeles Basin and adjacent hill slopes. Few

stands of native biotic communities remain today within the Los Angeles Basin, with present-day plant communities primarily being landscaped and introduced species.

3.4.2.3 Ethnographic Background

The Project Area lies within the territory of the Gabrieleño Native American people. It is believed that the total Gabrieleño territory covered more than 1,500 square miles and included the watersheds of the Los Angeles River, San Gabriel River, Santa Ana River, and Rio Hondo. The Gabrieleño also occupied the islands of Santa Catalina, San Clemente, and San Nicolas. Within this large territory were more than 50 residential communities with populations that ranged from approximately 50 to 150 individuals.

A typical Gabrieleño settlement contained a variety of structures used for religious, residential, and recreational purposes. This wealth of natural resources, coupled with effective technology and a well-developed trade and ritual system, resulted in a society that was among one of the most materially wealthy and culturally sophisticated cultural groups in California (McCawley, 1996). Trade was an important element of the Gabrieleño economy. In general, the Gabrieleño cultivated alliances with other groups, including a Chumash-Salinan- Gabrieleño alliance (Bean, 1976), and also maintained cult or ritual centers (such as the village Povongna, presumed to be located in the vicinity of Long Beach). Mission San Gabriel was founded on September 8, 1771, at a location near the Whittier Narrows. After this, the traditional Gabrieleño communities were depopulated and epidemics caused by the introduction of European diseases greatly reduced the population.

The ethnographic evidence suggests that several Gabrieleño settlements were located on the Los Angeles plain. Archaeologist Chester King identified several areas where archaeological remains of village sites dating to the ethnohistoric contact period may be located (Applied EarthWorks, 2019). Two of these vaguely defined areas include Ha'utnga in the Lynwood/South Gate/Watts area and Amupunga near the Rancho San Pedro (Dominguez) Adobe. A third village area known as Yaanga (or Yaangna), is believed to have been located on the west bank of the Los Angeles River slightly south of the old Spanish Plaza of Pueblo de Los Angeles in the vicinity of Union Station, north of the Project Area.

3.4.2.4 Historic Background

The Project Area was first utilized as agricultural land by inhabitants of the Pueblo that later became Los Angeles. The area on the east side of the Los Angeles River was used for cattle ranching until the 1830s. The west side of the River was a vineyard in the 1830s. The 1849 Gold Rush brought a large demand for citrus fruit, which was used to protect against scurvy, a common malady of miners. Oranges and grapefruit quickly overtook grapes as the area's primary crops. The fruit industry proved to be the saving grace of the regional economy when a drought in 1862 decimated the cattle industry. In 1858, Andrew Aloysius Boyle purchased a large section of the east side of the River and planted a vineyard. Despite its proximity to the center of Los Angeles, Boyle's land remained pastoral and was generally perceived as unfit for development at the time, due to its geographic isolation from the rest of the city because of the Los Angeles River. The agrarian character of the areas around the River was redefined with the arrival of the railroads in the late nineteenth century.

The development of Los Angeles was heavily dependent on evolving transportation systems for the delivery of raw materials and the moving of finished goods. Until the 1870s, only local rail lines ran through Los Angeles. The Los Angeles and San Pedro Railroad (LA & SP) was incorporated in 1868. The

LA & SP built a local line connecting the port of Wilmington with the inland City of Los Angeles. LA & SP was consolidated with the Southern Pacific in 1874 as part of the arrangement to bring the transcontinental Southern Pacific to Los Angeles. In 1876, Southern Pacific opened the line connecting Los Angeles to San Francisco, linking Los Angeles with the transcontinental railroad. The completion of a transcontinental rail line to Southern California in 1885 and a subsequent fare "war" between the Southern Pacific and Santa Fe railroads brought scores of newcomers to Los Angeles, which in turn produced a surge of land speculation and development activity across the region.

As the railroads increased mobility, Los Angeles ceased to be simply a market for manufactured goods produced in San Francisco and the East and began to support local industries as well. Similarly, as agricultural activities in other areas of the city supplanted those near the city center, the city center evolved from simply a shipping hub to a processing and manufacturing center. This was particularly true of the areas adjacent to the Los Angeles River where transcontinental railroads laid their tracks (Southern Pacific Railroad on the west side of the Los Angeles River and later the Atchison, Topeka & Santa Fe Railway on the east side). Streetcars crossed through the area, facilitating the movement of workers and encouraging development along the spine of the River. By 1901, seven streetcar lines traversed the River, linking downtown Los Angeles on the west with Boyle Heights on the east. These areas evolved into the City's first industrial district.

Industrial development was diverse and included freight houses and freight yards developed by the railroads in addition to warehouses, manufacturing facilities, and salvage yards. Construction-related industries expanded rapidly beginning in the 1880s when the regional real estate boom spurred residential and commercial construction. Industrial development in the area did not begin in earnest until the subdivision of two substantial tracts specifically dedicated for industrial use: the Industrial Tract, recorded in 1903 by the Industrial Realty Company; and the Industrial Center Tract, recorded in 1904. These tracts defined the southwestern section of the Project Area, terminating at Seventh Street. In the early decades of the twentieth century, many of the area's industrial buildings were one of two types: manufacturing or processing facilities and warehouses. A 1909 map of the area notes the considerable number of warehouses and storage facilities which had been constructed in just a few years, as well as a wide variety of processing and manufacturing operations – including lumber yards, freight yards, ice, and cold storage, slaughterhouses, meatpackers, produce companies and canneries, and blacksmiths, among others (Historic Resources Group, 2016). Many of the area's industrial buildings were constructed directly on a rail spur; these buildings often display curved facades that follow the tracks, with docks and large bay doors set several feet above the ground (to the height of a boxcar), to facilitate the loading and unloading of goods. Warehouses were built either as general storage facilities – with space that could be rented by a variety of companies or operators – or were purpose-built facilities associated with a particular company.

As new local industries established themselves, processing and manufacturing operations in the area continued to expand. Two industries flourished during this period: ice and cold storage, and food processing and packaging. Cold storage emerged in response to the demand for fresh products in urban areas and provided a critical link between agricultural goods from farms, fisheries, and ranches and their distribution to fresh produce markets and food processors. Construction of cold storage warehouses was initially linked with that of ice-making plants, with both frequently located within the same facility. Food processing industries represented some of the earliest industrial development in Los Angeles, but the

industry exploded in operation during the 1910s and 1920s as companies began to embrace mechanization to meet the demands of new chain stores. Food processing eventually became one of the dominant industries in the area.

The character of the industrial areas adjacent to the River remains largely a function of the redevelopment of Union Pacific's former railroad facilities during the 1920s. In response to the strong demand for industrial space arising from the economic growth of the Los Angeles region in the 1910s, Union Pacific, on the east side of the River, began removing many of its facilities near the Los Angeles River and dividing its properties into industrial sites. A major incentive attracting business to this industrial district was the Union Pacific spur tracks interlaced among the streets, providing industries with easy access to a national freight rail network. This ushered in a wave of industrial development on the east side of the River.

By the 1920s, the east and west sides of the River were fully established as an industrial hub. This was aided in part by the pattern of development occurring outside the central city. As the City of Los Angeles continued to annex existing communities as well as available land in the San Fernando Valley, zoning was amended to eliminate residential development and accommodate the construction of more offices, retail, and manufacturing facilities in the downtown area. Boyle Heights, just east of the Union Pacific industrial zone along the River, had become a densely populated residential suburb.

The east side of the Los Angeles River and Boyle Heights benefited tremendously from the Viaduct Bond Act of 1923, which set into motion an ambitious and far-reaching bridge building program across the city. The sale of bonds financed the construction of a series of monumental concrete viaducts that spanned both the Los Angeles River and the rail lines that ran adjacent to the riverbed; seven of these viaducts, at Macy (now Cesar Chavez), First, Fourth, Whittier/Sixth, Seventh, Ninth (now Olympic), and Washington Streets, were routed into Boyle Heights and were completed between 1925 and 1933. The Whittier/Sixth Street Bridge built in 1933 (now demolished) was the last bridge built as part of the bond measures. These bridges replaced several existing wood and metal truss bridges, which were susceptible to flood damage and lacked the capacity to accommodate traffic that had been generated by the area's rapid growth.

Industrial development in the area declined following World War II. After the Interstate Highway System was launched in the 1950s, the trucking industry became the preferred mode of transportation for industrial activity and the railroads declined. Locating factories and warehouses in districts with spur track access became less important. At the same time, many pre-war industrial districts had become highly congested urban areas that were less convenient for truck access, unlike newly-built factories and warehouses on the outskirts of cities and in suburbs. The construction of an expansive freeway network throughout Southern California also drastically altered the configuration and physical character of the Project Area. Five freeways and the multi-level East Los Angeles Interchange were routed through Boyle Heights between 1948 and 1965.

While industries evolved over time, the area maintained its character as an industrial center, with one processing or manufacturing operation replacing another. Over the course of the twentieth century, a single manufacturing facility might house the production of everything from dog food to pie. In the 1950s, the area was home to automotive manufacturing, trucking and transport, furniture manufacturing and storage, paint and chemical manufacturing, and paper and plastic production – as well as historically dominant industries such as food processing and lumber and woodworking operations.

By the 1960s, however, the character of the area was evolving away from that of an industrial center. Local industries and manufacturers struggled to adapt to the competition brought on by containerization and other modern technologies. Outlying fledgling industrial centers such as Vernon and the City of Commerce were comparatively undeveloped and offered plentiful land at lower prices, presenting many companies with an opportunity to relocate and construct newer and more efficient facilities. As a result, many buildings in the industrial district were vacant by the 1970s.

The use of the area's industrial buildings evolved as artists and other creative types began to congregate amidst the vacant buildings and empty lots. Priced out of established artists' colonies in neighborhoods such as Venice and Hollywood, Los Angeles' industrial district provided many with an opportunity to live and work inexpensively in vast warehouse buildings. Many of the area's most prominent industrial buildings found new life as gallery space and underground hangouts for a burgeoning art and music scene. By the 1980s, the area was home to several avant-garde art galleries, giving rise to the group of early artists now called the "Young Turks" (Miller, 2014). In 1981, the City of Los Angeles implemented the Artist-in-Residence Program, which legalized the residential use of formerly industrial buildings for artists, legitimizing their efforts. In the mid-1990s, the area was officially designated as the Arts District by the City. A subsequent wave of development began in 1999 with the passage of the Adaptive Reuse Ordinance, which relaxed zoning codes and allowed for the conversion of pre-1974 commercial and industrial buildings into residences for artists and non-artists alike. The area continues to attract new commercial and residential development, as existing facilities are adapted to meet the needs of the growing community.

3.4.3 Identification and Evaluation of Cultural Resources

3.4.3.1 Methodology

Archaeological Resources

Record searches for previous documentation of identified archaeological resources were conducted. A reconnaissance-level archaeological survey of the Project Area was conducted on January 11, 2018. The purpose of the survey was to assess the current conditions of the Project Site (i.e., the footprint of the proposed Project) to examine any exposed native sediments that may be present. In addition, an attempt was made to re-identify the two archaeological sites that had been previously recorded in the Project Site west of the River. At the time of the survey, much of the proposed Project Site was under construction for the Sixth Street Viaduct Seismic Improvement Project. Due to safety concerns and access issues, only the Project Site, and not the area encompassing the Los Angeles River and railroad rights-of-way, was examined by the archaeologist during the reconnaissance survey.

Tribal Cultural Resources

On November 3, 2017, NAHC recommended that local Native American tribes be contacted for information on Native American resources within the Project Area. Applied EarthWorks sent a letter via electronic mail on January 18, 2018, to these groups. A second attempt at correspondence was made on February 7, 2018. Only one response was received, from the Gabrieleño Indians of California Tribal Council. The City is currently consulting with the Gabrieleño Indians of California Tribal Council in accordance with AB 52.

Historical Resources

The study area was defined as roughly a two-parcel radius to the north and south of East Sixth Street and Whittier Boulevard from Interstate 5 on the east to Mill Street on the west. The Project Area also included a segment of the Los Angeles River, adjacent railroad rights-of-way, and two bridges located at East Fourth Street to the north and East Seventh Street to the south. In order to identify and evaluate historical resources, a multi-step methodology was utilized. Record searches for previous documentation of identified historic resources were conducted, including listings in the NRHP, determinations of eligibility for NRHP listings, and the City of Los Angeles' historic resource inventories. Prior historical resource surveys involving the Project Area were also reviewed, including the 6th Street Viaduct Seismic Improvement Project Historical Resources Evaluation Report (Parsons, 2007), Adelante Eastside Redevelopment Project Intensive Historic Resources Survey (PCR Services Corporation, 2008), and SurveyLA (Historic Resources Group, 2016). An intensive survey, including photography and background research, was then made of the study area.

3.4.3.2 Survey Results

Archaeological Resources

Within the Project Area, many of the buildings and structures that were previously located along Whittier Boulevard and Sixth Street have been demolished by the Sixth Street Viaduct Seismic Improvement Project. In the portion of the Project Area east of the Los Angeles River, a series of bridge support columns have been constructed along Whittier Boulevard running in a southeast-to-northwest direction. At the time of the site visit (January 11, 2018), bridge support columns had not yet been installed west of the River, but portions of the west abutment immediately west of Mateo Street were under construction. An inspection of exposed sediments revealed a high level of ground disturbance throughout the Project Area. Examination of the Los Angeles River and adjacent railyards from the public right-of-way indicates that the entire APE is developed with few to no areas of exposed ground.

An archaeological monitor from Duke CRM was on-site at the time of the site visit to observe ground-disturbing activities associated with the Sixth Street Viaduct Seismic Improvement Project. Archaeological monitoring for the Sixth Street Viaduct Seismic Improvement Project had been ongoing since at least August 2017. The archaeological monitor noted that in the portion of the Project Area west of the Los Angeles River, existing ground disturbance extended approximately five or six feet in depth. Although no prehistoric artifacts had been encountered during the monitoring activities, the archaeological monitor stated that various historical ceramic and glass fragments have been recovered throughout the area. She noted that several small stone spheres, which likely date to the historic period, were recovered near the Sixth Street and Mateo Street intersection.

The recorded locations of 19-004192 and 19-004193 were revisited during the reconnaissance survey. An examination of the ground surface in these areas revealed the area had been extensively disturbed and recently graded. Site 19-004192 consists of a historic-period refuse scatter. The site measures 50 by 25 feet in area and is located west of the Los Angeles River and east of Santa Fe Street under the Sixth Street Bridge. The scatter consists of 13 pieces of brick and 2 glass bottle fragments. The site was initially recorded within a proposed maintenance and storage facility for the Westside Subway Extension Project; the resource was previously determined ineligible for listing on either the NRHP or the CRHR (Sikes,

2012). Site 19-004193 consists of an early twentieth-century road remnant. The site measures 3.5 by 2.5 feet in area and is located near the foundation of the Sixth Street Bridge. No artifacts were found in association with the exposed road surface. The site is located within a proposed maintenance and storage facility for the Westside Subway Extension Project; the resource was previously determined ineligible for listing on either the NRHP or the CRHR (Sikes, 2012). No surface evidence was found for the previously documented historical refuse deposit (19-004192) or historical road (19-004193) (Applied EarthWorks, 2019).

Tribal Cultural Resources

NAHC indicated in a letter sent to Applied EarthWorks on November 3, 2017, that Native American resources were recorded in the Project Area. The NAHC recommended that local Native American groups be contacted to elicit specific information on Native American resources. Applied Earthworks sent a letter via electronic mail to these individuals on January 18, 2018.

Individuals/organizations contacted at the request of the NAHC are listed below:

- Charles Alvarez, Gabrieleño Tribe
- Robert Dorame, Chairperson of the Gabrieleño Indians of California Tribal Council
- Sandonne Goad, Chairperson of the Gabrieleño Nation
- Anthony Morales, Chairperson of the Gabrieleño San Gabriel Band of Mission Indians
- Andrew Salas, Chairperson of the Gabrieleño Band of Mission Indians-Kitz Nation

One response was received. Robert Dorame, Chairperson of the Gabrieleño Indians of California Tribal Council, stated that historic-period archaeological materials, as well as abalone shell, had been recovered outside of the Project Area but just north of the Project Area, along the west bank of the Los Angeles River. He also noted that the Los Angeles River's course had fluctuated through time and at one point it had covered much of the Project Area. Because of the proximity of the Project Area to both known archaeological remains and the Los Angeles River, Mr. Dorame stated that the Project Area is sensitive for prehistoric Native American remains. He requested that a Native American monitor affiliated with the Gabrieleño Indians of California Tribal Council observe all ground-disturbing activities (including bore holes and asphalt removal) associated with the proposed Project.

Historical Resources

Within the Project Area, there are no NRHP-listed properties. After research and field survey, it was determined that there are four historical resources as defined by CEQA in the Project Area:

- The Fourth Street Viaduct (LAHCM #904 and Bridge No. 53C0044) is a designated Los Angeles Historic-Cultural Monument and determined eligible for listing in the National and California Registers (Status Code 2S2).
- The Seventh Street Viaduct (LAHCM #906 and Bridge No. 53C1321) is a designated Los Angeles Historic-Cultural Monument and determined eligible for listing in the National and California Registers (Status Code 2S2).

- For the purposes of CEQA review, the segment of the Los Angeles River Channel within the Project Area is presumed to be a historical resource. Segments of the Los Angeles River outside of the Project Area were previously identified as eligible for listing under NRHP Criterion A and CRHR Criterion 1 as a contributing element of the larger, 51-mile linear resource (GPA Consulting, 2019). The river is presumed eligible for its association with flood control in the region and for facilitating the continued development of river-adjacent areas during and after World War II.
- The Downtown Los Angeles Industrial Historic District is a historic district identified as eligible for federal, state, and local historic designation through SurveyLA, a citywide historical resource survey conducted by the City of Los Angeles. The district is significant for its role in the industrial development of Los Angeles; this area served as the city's primary industrial district from the late-nineteenth century through World War II. It was identified as eligible for listing under NRHP Criterion A and CRHR and LAHCM Criterion 1. Five buildings within the Project Area were evaluated as non-contributors to the Downtown Los Angeles Industrial Historic District by SurveyLA. As non-contributors, these buildings do not add to the historic architectural qualities, historic association, or historic patterns for which the District is significant. In accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, these five buildings are not considered historical resources for the purposes of CEQA compliance; however, the District as a whole is considered a historical resource.

GPA Consulting re-surveyed the Project Area and did not identify any potential historical resources that were not already identified by SurveyLA (Historic Resources Group, 2016) and other recent historical resource surveys of the 6th Street Viaduct Seismic Improvement Project Area (Parsons, 2007) and Adelante Eastside Redevelopment Project Area (PCR Services Corporation, 2008). It is unlikely that further research would reveal previously unidentified historic associations and the properties in the Study Area were unlikely to meet the criteria for significance. Due to alterations, most of the properties were too altered to retain integrity to convey significance.

3.4.4 Environmental Impact Analysis

This section outlines the methodology, evaluation, and impacts for archaeological, tribal cultural, and historical resources. It is intended to assist in the evaluation and conclusions of the impact analysis provided below and in the formation of required mitigation measures.

3.4.4.1 Screening Analysis

Several impacts and corresponding thresholds of significance in the following section were eliminated from further analysis in this EIR. Topics were eliminated if the Initial Study for the proposed Project concluded there would be "No Impact," or if impacts were identified to be "Less Than Significant… and will not be discussed further in the EIR." Therefore, only the topics described in the section below were determined to require further analysis in this EIR. A copy of the Initial Study, which contains the eliminated topics, is provided in **Appendix A**.

3.4.4.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and the *L.A. CEQA Thresholds Guide*, the proposed Project would have a significant impact on Cultural Resources if it would:

V(a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.

D.3 *Historical Resources.* A project would normally have a significant impact on historical resources if it would result in a substantial adverse change in the significance of a historical resource. A substantial adverse change in significance occurs if the project involves:

- Demolition of a significant resource;
- Relocation that does not maintain the integrity and significance of a significant resource;
- Conversion, rehabilitation, or alteration of a significant resource that does not conform to the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings; or
- Construction that reduces the integrity or significance of important resources on the site or in the vicinity.

V(b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5

V(c) Disturb any human remains, including those interred outside of formal cemeteries?

According to Appendix G of the CEQA Guidelines, a project would have a significant impact related to tribal cultural resources if it would:

XVIII Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, 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:

(a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k).

(b) 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 Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.

3.4.4.3 Construction Impacts

The analysis below describes the potential temporary and permanent impacts on cultural resources for the proposed Project during construction.

V(a): Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

The proposed Project includes the construction of public recreational space on approximately 13 acres in areas underneath and adjacent to the Sixth Street Viaduct Replacement. The proposed Project is organized into three areas, referred to as the West Park, Arts Plaza and River Gateway, and the East Park. The River Gateway would involve permanent alterations to an existing pedestrian and maintenance tunnel (LA River Access Tunnel) that connects the Arts Plaza site with the west bank of the Los Angeles River. In addition, reinforced concrete planted terraces would be constructed on the west and east banks of the LA River channel. Four historical resources were

identified within the Project Area: Fourth Street Viaduct, Seventh Street Viaduct, the Los Angeles River, and the Downtown Los Angeles Industrial Historic District.

The Fourth Street Viaduct and Seventh Street Viaduct (the viaducts) are significant for their method of construction and innovative design. None of the activities associated with the construction phase of the proposed Project would physically impact the viaducts. The construction phase of the proposed Project would not result in a substantial adverse change in the significance of the viaducts.

The Los Angeles River is significant for its association with flood control in the region, for facilitating the continued development of river-adjacent areas during and after World War II, and for its method of construction. The construction phase of the proposed Project includes alterations to LA River Access Tunnel, which include widening the tunnel opening; resurfacing the entryway, pavement, and tunnel floor; painting; installing lighting; and installing safety features, including removable bollards or gate and warning devices. In addition, reinforced concrete planted terraces would be constructed on up to approximately 20,000 square feet of the west and east banks of the LA River channel. The proposed improvements would be compatible with the size, scale and proportion, and massing of the existing concrete channel. The historical resource would not be materially impaired; therefore, the activities associated with the construction phase of the proposed Project would not result in a substantial adverse change in the significance of the River.

The Downtown Los Angeles Industrial Historic District (District) is significant for its role as the City's primary industrial district from the late nineteenth century through World War II. The proposed Project Site is located outside the District boundaries. None of the activities associated with the construction phase of the proposed Project would physically or indirectly impact the District's contributing buildings or its other distinctive features. The construction phase of the proposed Project would not result in a substantial adverse change in the significance of the District.

The historic associations, design elements, and character defining features that convey the significance of the four historical resources in the Project Area would not be affected by the activities associated with the construction phase of the proposed Project. Therefore, impacts during construction would be less than significant and no mitigation measures are required.

V(b): Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Results of the archaeological assessment indicate there are no significant archaeological resources that would be affected by the proposed Project. However, the archaeological sensitivity model created for the proposed Project indicates that undisturbed native sediments throughout much of the Project Site have a moderate potential for buried archaeological deposits dating to the prehistoric period. Within the Los Angeles River and railroad rights-of-way, the potential of encountering prehistoric and historic archaeological remains is considered relatively low.

The development of the West Park and East Park portions of the Project Site has the potential to disturb deeply buried and intact prehistoric and historic archaeological resources. Archaeological monitoring would be conducted in the West Park and East Park for excavations at depths greater than five feet (see **BMP-CUL-1**). In the unlikely event that previously undisturbed archaeological resources are encountered during construction, all work in the vicinity would stop until a qualified

archaeologist can visit the site of discovery and assess the significance of the archaeological resource (see **BMP-CUL-4**). Therefore, the project would not cause a substantial adverse change in the significance of an archaeological resource.

V(c): Would the project disturb any human remains, including those interred outside of formal cemeteries?

No human remains are known to exist in the Project Site, and the location does not encompass any formal cemeteries. However, the Gabrieleño Indians of California Tribal Council have indicated that the Project Area is sensitive for prehistoric Native American remains. Health and Safety Code Section 7050.5, Section15064.5(e) of the CEQA Guidelines, and PRC Section 5097.98 mandate the process to be followed in the unlikely event of an accidental discovery of any human remains in a location other than a dedicated cemetery (see **BMP-CUL-5**). Specifically, the Los Angeles County Coroner must be notified within 24 hours of the discovery of potentially human remains. The Coroner must then determine within two working days of being notified if the remains are subject to his or her authority. If the Coroner recognizes the remains to be Native American, he or she must contact the NAHC by phone within 24 hours. The NAHC then designates a Most Likely Descendant (MLD) with respect to the human remains within 48 hours of notification. The MLD will then have the opportunity to recommend to the Project proponent means for treating or disposing of, with appropriate dignity, the human remains and associated grave goods within 24 hours of notification.

XVIII: Cause a substantial adverse change in the significance of a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American Tribe that is listed or determined eligible for listing on the California Register of Historical Resources, listed on a local historical register, or otherwise determined by the lead agency to be a tribal cultural resource?

The Gabrieleño Indians of California Tribal Council has indicated that the Project Area is sensitive for prehistoric Native American remains. Chairperson Dorame requested that a Native American monitor affiliated with the Gabrieleño Indians of California Tribal Council observe all ground-disturbing activities (including bore holes and asphalt removal) associated with the proposed Project. It is anticipated that a qualified tribal cultural resource monitor may be present during excavation activities in the proposed Arts Plaza (see **BMP-CUL-3**). In addition, a tribal cultural resources sensitivity training session would be held for the construction contractor prior to construction activities (see **BMP-CUL-2**). The City will continue working with the tribe in accordance with the requirements of AB 52. Because no tribal cultural resources were observed in the Project Area, impacts would be less than significant and no mitigation measures are required.

3.4.4.4 Operational Impacts

The analysis below describes the temporary and permanent impacts on cultural resources anticipated as a result of the proposed Project during operation. The analysis below evaluates potential impacts, based upon the applicable threshold of significance.

V(a): Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

Operation of the proposed Project would involve the use and maintenance of public recreational space on approximately 13 acres in areas underneath and adjacent to the Sixth Street Viaduct. As described above, four historical resources were identified within the Project Area: Fourth Street Viaduct, Seventh Street Viaduct, the Los Angeles River, and the Downtown Los Angeles Industrial Historic District.

The Fourth Street Viaduct and Seventh Street Viaduct (the viaducts) are significant for their method of construction and innovative design. Operation of the proposed Project would not involve activities that could result in the demolition, relocation, conversion, rehabilitation, or alteration of the viaducts. Therefore, the operations phase of the proposed Project would not result in a substantial adverse change in the significance of the viaducts.

The Los Angeles River is significant for its association with flood control in the region; for facilitating the continued development of river-adjacent areas during and after World War II; and for its method of construction. During the operation of the proposed Project, existing access to the River via the LA River Access Tunnel on the west bank would be maintained. In addition, the west and east banks of the LA River channel would include reinforced concrete planted terraces on up to approximately 20,000 square feet of the west and east LA River banks. The proposed improvements are compatible with the size, scale and proportion, and massing of the existing concrete channel. The historical resource would not be materially impaired; therefore, the proposed Project would not cause a substantial adverse change in the significance of the LA River.

The Downtown Los Angeles Industrial Historic District (District) is significant for its role as the City's primary industrial district from the late nineteenth century through World War II. The Project Site is located outside the District boundaries. Though the proposed Project would introduce a new visual element to the area southeast of the District, the impact would be less than significant. Given the Project Site's location outside of the District, the proposed Project would not substantially change the spatial relationships between the District's significant components. As the Project would not materially impair the District, it would not result in a substantial adverse change to the historical resource.

The historic associations and character defining features that convey the significance of the four historical resources in the Project Area would not be affected by the activities associated with the operations phase of the proposed Project. Therefore, impacts during operation would be less than significant and no mitigation measures are required.

V(b): Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Operation of the proposed Project would not involve any ground-disturbing activities. Therefore, there would be no potential to disturb, damage, or degrade an archaeological resource or its setting. No operational impacts on archeological resources would occur and no mitigation measures are required.

V(c): Disturb any human remains, including those interred outside of formal cemeteries?

Operation of the proposed Project would not involve any ground-disturbing activities. Therefore, there would be no potential to disturb any human remains. Because operation of the proposed Project would not involve any ground-disturbing activities, no operational impacts on human remains would occur and no mitigation measures are required.

XVIII: Cause a substantial adverse change in the significance of a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American Tribe that is listed or determined eligible for listing on the California Register of Historical Resources, listed on a local historical register, or otherwise determined by the lead agency to be a tribal cultural resource?

Operation of the proposed Project would not involve ground disturbing activities; therefore, operation of the proposed Project would not disturb prehistoric Native American remains nor cause an adverse change in the significance of a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American Tribe. Because operation of the proposed Project would not involve any ground-disturbing activities, no operational impacts on sites, features, places, cultural landscapes, sacred places, or objects with cultural value to a California Native American Tribe would occur and no mitigation measures are required.

3.4.5 Best Management Practices

BMP-CUL-1: Archaeological Monitoring During Excavation

A qualified archaeological monitor shall conduct archaeological monitoring in the West Park and East Park for excavations at depths greater than 5 feet. Monitoring efforts may be reduced or eliminated for those portions of the Project Area shown to have been recently disturbed by construction activities associated with the Sixth Street Viaduct Project.

BMP-CUL-2: Tribal Cultural Resources Sensitivity Training

The City shall invite a qualified tribal representative from the Gabrieleño Band of Mission Indians to a pre-construction meeting to provide a training session to the construction contractor regarding potential tribal resources that could be encountered during construction activities and procedures to follow should a tribal resource be encountered.

BMP-CUL-3: Tribal Cultural Resources Monitoring During Excavation

The City shall retain and compensate for the services of a Tribal monitor who is both approved by the Gabrieleño Band of Mission Indians-Kizh Nation Tribal Government and is listed under the NAHC's Tribal Contact list for the Project Area. The Tribal monitor shall only be present on-site during the construction phases that involve ground-disturbing activities in the proposed Arts Plaza. Monitoring efforts may further be reduced or eliminated for those portions of the proposed Arts Plaza that (1) are underlain with artificial fill of known origin, (2) require superficial scraping of land at depths less than five feet, or (3) are demonstrated to have been recently disturbed by construction activities associated with the Sixth Street Viaduct Project. The on-site monitoring shall cease when the grading and excavation activities in the proposed Arts Plaza are completed, or when the Tribal representatives and monitor have indicated that the site has a low potential for impacting tribal cultural resources.

BMP-CUL-4: Unanticipated Discovery of Archaeological and Tribal Cultural Resources

In the event that potentially significant buried archaeological materials are encountered within the Project Area, all work in the vicinity must stop until the archaeological and Tribal monitor can visit the site and assess the significance of the resource. If the resources are Native American in origin, the Gabrieleño Band of Mission Indians-Kizh Nation shall coordinate with the City regarding treatment and curation of these resources. Work may continue on other parts of the Project Area while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section 15064.5 [f]).

BMP-CUL-5: Unanticipated Discovery of Human Remains

Health and Safety Code Section 7050.5, Section 15064.5(e) of the CEQA Guidelines, and PRC Section 5097.98 mandate the process to be followed in the unlikely event of an unanticipated discovery of human remains in a location other than a dedicated cemetery. The Los Angeles County Coroner must be notified within 24 hours of the discovery of potentially human remains. The Coroner must then determine within two working days of being notified if the remains are subject to his or her authority.

If the Coroner recognizes the human remains (including bone fragments and funerary objects) to be Native American, he or she must contact the NAHC by phone within 24 hours. The NAHC then designates a Most Likely Descendant (MLD) with respect to the human remains within 48 hours of notification. The MLD will then have the opportunity to recommend to the Project proponent means for treating or disposing of, with appropriate dignity, the human remains and associated grave goods within 24 hours of notification.

3.4.6 Mitigation Measures

Impacts on Cultural Resources would be less than significant; therefore, mitigation measures are not required.

3.4.7 Significant Unavoidable Adverse Impacts

There are no significant unavoidable adverse impacts on archaeological, historical, or tribal cultural resources resulting from construction and operation of the proposed Project.

3.4.8 Cumulative Impacts

3.4.8.1 Historical Resources

Potential impacts to the four historical resources in the Project Area (Fourth Street Viaduct, Seventh Street Viaduct, the Los Angeles River, and the Downtown Los Angeles Industrial Historic District) would be less than significant. Only one resource, the Los Angeles River, would be directly affected. A previously approved project, the Sixth Street Viaduct Replacement Project, is currently underway and involves replacement with the historic Sixth Street Viaduct over the Los Angeles River with a new bridge. No impacts on the historic properties of the Los Angeles River were identified in the EIR prepared for the Sixth Street Viaduct Replacement Project. A foreseeable future project, the Los Angeles River Bike Path Gap Closure Project, would involve an extension of existing segments of the 32-mile greenway proposed in the Los Angeles River Revitalization Master Plan. This future project would take place along the Los Angeles River from Elysian Valley through Downtown Los Angeles

to the City of Vernon. The bike path improvements proposed by the Gap Closure Project would impact the Los Angeles River in a manner similar to the improvements proposed by the PARC Project. Therefore, the impact of the Gap Closure Project to the Los Angeles River is expected to be less than significant. In addition, it is expected that the Gap Closure Project would also be required to comply with applicable regulatory requirements and include similar best management practices. Therefore, cumulative impacts to historical resources would be less than significant and would not be cumulatively considerable.

3.4.8.2 Archaeological Resources

Archaeological monitoring would be conducted in the West Park and East Park for excavations at depths greater than five feet. In the event that potentially significant buried archaeological materials are encountered within the Project Area, all work in the vicinity must be halted until a qualified archaeologist can visit the site of discovery and assess the significance of the archaeological resource. In addition, the City will continue working with the tribe in accordance with the requirements of AB 52. Impacts to archaeological resources would be less than significant. It is expected that related projects and other future development would also be required to comply with applicable regulatory requirements and include similar best management practices. Therefore, cumulative impacts to archaeological resources would be less than significant and would not be cumulatively considerable.

3.4.8.3 Tribal Cultural Resources

The Project Site is sensitive for prehistoric Native American remains. The City will continue working with the tribe in accordance with the requirements of AB 52. Impacts to Tribal Cultural Resources would be less than significant. It is expected that related projects and other future development would also be required to comply with applicable regulatory requirements and include similar best management practices. Therefore, cumulative impacts to tribal cultural resources would be less than significant and would not be cumulatively considerable.

3.5 Energy

This section describes the affected environment and regulatory setting for Energy related to the Project Area. In addition, this section describes the potential impacts related to Energy that would result from the implementation of the proposed Project. As noted in the analysis below, impacts associated with Energy during construction and operation of the proposed Project would be less than significant and no mitigation measures are required.

3.5.1 Regulatory Setting

A review of the various federal, state, regional, and local government regulatory requirements was conducted to identify regulations that relate to Energy. This section summarizes the various regulatory requirements that are relevant to the proposed Project.

3.5.1.1 State

California Environmental Quality Act

Appendix F of the California Environmental Quality Act (CEQA) stipulates that Environmental Impact Reports (EIR) include a discussion of the potential energy impacts of a proposed project, with emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy (Sections 21083 and 21087, Public Resources Code). EIRs may include, but are not limited to, discussions of energy consuming equipment and processes used during construction and operation of a project; the energy intensiveness of materials and equipment required for the project; the effects of a project on local and regional energy supplies; and the degree to which a project complies with existing energy standards.

California Long-Term Energy Efficiency Strategic Plan

The California Public Utilities Commission adopted the California Long-Term Energy Efficiency Strategic Plan on September 18, 2008 (California Public Utilities Commission, 2008). The purpose of the strategic plan is to provide a roadmap for achieving maximum energy savings across all major sectors in California. The strategic plan identifies specific short- and long-term strategies to assist in achieving long-term vision goals for energy efficiency.

California Energy Commission

The California Energy Commission (CEC) was established by the Warren-Alquist Act in 1974 (California Energy Commission, 2014). Public Resources Code Sections 25402 subdivisions (a)-(b) and 25402.1 require the CEC to establish performance standards in the form of an "energy budget," which is determined based on the energy consumption per square foot of floor space. In 2014, the CEC developed a strategic plan that established goals for making energy public policy recommendations, collecting and providing energy data to policy makers, developing programs to promote energy investments and solutions, adopting building energy efficiency standards, developing energy-efficient transportation technology, and promoting renewable energy in California (California Energy Commission, 2014).

California Building Standards Code

The California Building Standards Code is contained in Title 24 of the California Code of Regulations (CCR). The code is comprised of building standards to address California's ever-changing conditions and particular concerns, including standards that have been adopted and adapted from national building codes. All occupancies in California are subject to the California Building Standards Code.

2016 Building Energy Efficiency Standards for Residential and Nonresidential Buildings

The 2019 Building Energy Efficiency Standards (or California Energy Code), contained in Title 24, Part 6, of the CCR, were adopted by the CEC in 1976 and are updated approximately every three years (California Energy Commission, 2018). These standards apply to all residential and non-residential buildings, with a few exceptions (hospitals, nursing homes, and jails), and apply to new and existing buildings. The California Energy Code regulates a building's "energy budget" for consuming hydro-carbon fuel and electricity. The California Energy Code also contains energy and water efficiency requirements for newly constructed buildings and alterations to existing buildings. In addition, the California Energy Code provides requirements for manufacturing, construction, and installation of building components.

California Green Building Standards Code

The California Green Building Standards Code (or CALGreen) is contained in Title 24, Part 11 of the CCR. The purpose of CALGreen is to improve public health and safety using building design and construction concepts that result in positive environmental impacts. CALGreen encourages sustainable construction practices in the following categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality.

3.5.1.2 Local

2016 Power Integrated Resource Plan

The 2016 Power Integrated Resource Plan guides the Los Angeles Department of Water and Power's (LADWP) efforts to supply reliable electricity in an environmentally responsible and cost effective manner (Los Angeles Department of Water and Power, 2016). The 2016 Power Integrated Resource Plan analyzes the economic and environmental impact of increased local solar, energy storage, and transportation electrification and recommends strategies to meet the future electric needs of the City. A primary strategy of the Integrated Resource Plan is to improve energy efficiency through reducing greenhouse gas emissions, with a goal of increasing the renewable portfolio standard to 55 percent by 2030 and 65 percent by 2036.

2017 Los Angeles Green Building Code

The Los Angeles Green Building Code (LAGBC), codified in the City's Green Building Ordinance (Los Angeles Municipal Code, Chapter IX, Article 9), is based on CALGreen. The LAGBC applies to the following types of projects: all new buildings (residential and non-residential); all additions (residential and non-residential); alterations with building valuations of $200,000 or more (residential and nonresidential); and residential alterations that increase the building's conditioned volume. Like CALGreen, the LAGBC includes mandatory measures and standards for achieving energy efficiency.

Sustainable City pLAn

The City developed the *Sustainable City pLAn* (Plan) in 2015, and an updated annual report was published in 2019, titled L.A.'s Green New Deal (Office of the Los Angeles Mayor, 2019). The plan consists of 47 targets with milestones and initiatives for a cleaner environment and stronger economy. The plan describes the City's vision for increasing energy efficiency, with targets of reducing building energy use per square foot for all building types by 34% by 2035.

Green LA and ClimateLA

In May 2007, the City published *Green LA: An Action Plan to Lead the Nation in Fighting Global Warming*, which included more than fifty specific climate mitigation actions designed to reduce the City's contributions to climate change, and to prepare a response to the changes that have already begun to occur (City of Los Angeles, 2007). City departments worked together to respond to the recommendations set forth in the *Green LA* action plan, resulting in *ClimateLA*. *ClimateLA* is an implementation program that provides detailed information about each action item discussed in the *Green LA* framework, as well as adaptation measures and mitigation. Some of the adaptive action items recommended include making Los Angeles a worldwide leader in green buildings, reducing water consumption, utilizing renewable energy sources, and converting the City's fleet to cleaner and more efficient models. *Green LA* and *ClimateLA* were established with the goal of reducing greenhouse gas emissions; however, these efforts would result in the added benefit of decreasing energy consumption in the City.

City of Los Angeles General Plan

As required by the State of California, the City's General Plan addresses goals, policies, and standards related to land use, circulation, housing, conservation, open space, noise, and safety (City of Los Angeles, 2017). To address goals that meet the unique needs of the City, the General Plan also includes elements related to health and wellness, air quality, historic preservation and cultural resources, and public facilities and services. Several of the General Plan elements are currently undergoing revision. The General Plan elements that pertain to Energy include Plan for a Healthy Los Angeles, Air Quality, Mobility Plan 2035, and Conservation, which establish the following applicable policies:

Healthy Building Design and Construction Element

- Policy 2.2: Promote a healthy built environment through constructing buildings designed to reduce energy costs, promoting green building standards, and increasing energy efficiency.

Air Quality Element

- Policy 5.1.2: Effect a reduction in energy consumption and shift to non-polluting sources of energy in its buildings and operations.

Mobility Plan 2035

- Objective SF-12: Continue to refront existing street lighting infrastructure with energy-efficient LEDs.

Conservation Element

- Policy 1: Continue to encourage energy conservation and petroleum product reuse.

3.5.2 Environmental Setting

The CEC California Energy Consumption Database reports energy consumption data for various utilities, agencies, counties, and planning areas. In 2019, the total electricity consumption in Los Angeles County was 46,556 gigawatt hours (GWh) for non-residential sectors and 19,562 GWh for residential sectors, for a total of 66,118 GWh. Gas consumption in Los Angeles County was 1,813 million therms for non-residential uses and 1,236 million therms for residential uses, for a total of 3,048 million therms (California Energy Commission, 2019).

Electricity is supplied to the Project Area by the LADWP. LADWP operates 34 generation plants with a total capacity of approximately 8,009 megawatts. The department's energy supply comes from a variety of energy sources, including renewable sources, natural gas, nuclear, hydroelectric, and coal (Los Angeles Department of Water and Power, 2019).

LADWP serves over 4 million residents covering an area of 465 square miles (Los Angeles Department of Water and Power, 2019). LADWP energy sources for the 2016 calendar year are summarized in **Table 3.5-1**. LADWP's electric capacity is approximately 7,880 megawatts and the record instantaneous peak demand for electricity was 6,502 megawatts, which was reached on August 31, 2017. LADWP electricity usage for various sectors in 2017 is summarized in **Table 3.5-2**.

The Southern California Gas Company (SoCalGas) provides natural gas to the City. SoCalGas is the nation's largest distributor of natural gas, serving 21.6 million consumers over 20,000 square miles throughout Central and Southern California (Southern California Gas Company, n.d.).

Transportation accounted for approximately 40 percent of the energy consumption in California in 2016. In the same year, California consumed approximately 3,116 trillion British thermal units (BTU) for the transportation sector energy, from natural gas, petroleum, and electricity sources. In 2017, California consumed approximately 350,604 thousand barrels of gasoline, or approximately 1,772 trillion BTU, for the transportation sector. In the same year, California consumed approximately 82,842 thousand barrels of diesel, or 477 trillion BTU, for the transportation sector (U.S. Energy Information Administration, 2018).

Table 3.5-1: LADWP Energy Sources (Calendar Year 2019)

Energy Source	Percent
Renewable Energy[1]	34%
Natural Gas	27%
Nuclear	14%
Large Hydroelectric	3%
Coal	21%
Other/Unspecified Sources of Power	0%

1. Renewable energy sources include biomass and waste (0%), geothermal (9%), eligible hydroelectric (3%), solar (12%), and wind (10%).
Source: (Los Angeles Department of Water and Power, 2019)

Table 3.5-2: 2019 LADWP Electricity Consumption

Sector	Electricity Consumption (GWh)
Agriculture & Water Pump	21.6
Commercial Building	11,115.8
Commercial Other	937.8
Industry	11,780.9
Mining & Construction	273.3
Residential	7,388.6
Streetlight	106
Total Usage	21,624

Source: (California Energy Commission, 2019)

The existing energy usage in the Project Area was quantified using the California Emissions Estimator Model (CalEEMod) v2016.3.2 computer program, using the assumption that the existing land use is classified as "General Heavy Industry." Existing energy use is summarized in **Table 3.5-3** and detailed calculations are provided in **Appendix B-14**.

Table 3.5-3: Existing Energy Use in the Project Area

Energy Source	Annual Energy Consumption	Annual MMBTU
Electricity	2,485,290 kWh	8,480
Natural Gas	4,052,590 kBTU	4,053
Mobile Fuel (Diesel)	30,098 gallons	4,135
Mobile Fuel (Gasoline)	47,797 gallons	5,756
Water Conveyance & Treatment	52 million gallons	2,300
	Total	24,724

Energy calculations were quantified using the CalEEMod, v2016.3.2, computer program, using the assumption that the existing land use is classified as "General Heavy Industry."
MMBTU = million British thermal units; kWh = kilowatt hours; kBTU = kilo-British thermal unit
Source: (Ambient Air Quality & Noise Consulting, 2019)

3.5.3 Environmental Impact Analysis

3.5.3.1 Methodology

Construction

Regarding energy use (e.g., fuel use) during construction, it is assumed that only diesel fuel would be used in construction equipment. On-road vehicles for hauling materials and worker commute trips assumed a mix of diesel and gasoline fuel use. Construction schedules, equipment numbers, horsepower ratings, and load factors were used to calculate construction-related fuel use, based on default assumptions contained in the CalEEMod. Diesel fuel used for off-road equipment was estimated based on a factor of 0.05 gallons of diesel fuel per brake-horsepower hour derived from the South Coast Air Quality Management District's (SCAQMD) CEQA Air Quality Handbook (South Coast Air Quality Management District, 1993). Average fuel usage rates by vehicle class, fuel type (e.g., diesel, gasoline, electric, and natural gas), and average vehicle trip distances for on-road vehicles were obtained from the California Air Resources Board's (CARB) EMFAC2017 mobile-source emissions inventory for Los Angeles County. In addition, to aid in the comparison of energy use associated with the various categories evaluated, total energy use was converted to BTU, which are reported in units of one million BTU (MMBTU).

Operation

Proposed Project operation would include the consumption of diesel and gasoline fuel from on-road vehicles. Transportation fuel-use estimates were calculated by applying average fuel usage rates per vehicle mile to vehicle miles traveled (VMT) data associated with the proposed Project. Vehicle miles traveled was derived from the CalEEMod modeling conducted for the proposed Project. Daily VMT for special events were adjusted to annual VMT based on the estimated number of annual events. Average fuel usage rates by vehicle class, fuel type (e.g., diesel, gasoline, electric, and natural gas), and average

vehicle trip distances were obtained from CARB's EMFAC2017 mobile-source emissions inventory for Los Angeles County. Building energy use was estimated using CalEEMod, version 2016.3.2.

Energy use was calculated for both existing and proposed land uses. CalEEMod includes 63 different land use types for which trip rates have been established. The existing land use was classified as General Heavy Industry. Proposed land uses that would occur at the Project Site were classified as the following: City Park (1.45 Acre Park), City Park (5.71 Acre Park) Fast Food Restaurant without Drive Thru (700 square foot café), Health Club (2,000 square foot building), City Park (two soccer fields), City Park (one acre park special events). To aid in the comparison of energy use associated with the various categories evaluated, total energy use was converted to BTU, which are reported in units of MMBTU.

3.5.3.2 Thresholds of Significance

According to Appendix G of the State CEQA Guidelines and the *L.A. CEQA Thresholds Guide*, the proposed Project would have a significant impact on Energy if it would:

VI(a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

VI(b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

3.5.3.3 Construction Impacts

VI(a): Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

During the construction period, equipment and vehicles would primarily be powered by diesel fuel and would likely require minimal electricity. Estimated construction-period fuel use is summarized in **Table 3.5-4** and detailed calculations are provided in **Appendix B-14**. As shown in **Table 3.5-4**, construction-period fuel use would be 23,681 MMBTU over the entire construction period, or approximately 789 MMBTU when amortized over the anticipated 30-year life of the project.[i]

Construction-period energy use includes the energy that would be used for haul trips, equipment use, and worker commute trips.

[i] Construction-period energy consumption was divided over the anticipated 30-year life of the proposed Project, which is consistent with the methodology for estimating greenhouse gas emissions (see Section 3.7). Although construction would occur over a period of approximately two years for Phase I and six months for Phase II, this method is intended to apportion the upfront energy consumption over the life of the proposed Project.

Table 3.5-4: Estimated Construction-Period Fuel Use

	Diesel Fuel Use (gallons)	Gasoline Fuel Use (gallons)	MMBTU
Overall Construction Energy Use	157,403	17,080	23,681
Amortized Construction Energy Use[1]	5,237	569	789

Energy calculations were quantified using the CalEEMod, v2016.3.2, computer program.
1. Construction energy use was amortized over an assumed 30-year project life.
MMBTU = million British thermal units
Source: (Ambient Air Quality & Noise Consulting, 2019)

The fuel consumption from construction vehicles and equipment would be temporary and would represent a negligible increase in regional energy consumption. Best management practices (BMP) and mitigation measures to reduce air quality and greenhouse gas emissions would be implemented during the construction period, which would contribute to reductions in energy consumption (see Sections 3.2 and 3.7). These measures include complying with SCAQMD rules and regulations, implementing idling limitations, using equipment that meets Tier 4 off-road emission standards, and offering ride-share and transit incentives for construction workers. As such, the proposed Project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction. Therefore, impacts would be less than significant and no further mitigation is required.

VI(b): Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Applicable plans related to renewable energy or energy efficiency include the California Long-Term Energy Efficiency Strategic Plan, LADWP 2016 Power Integrated Resource Plan, *Sustainable City pLAn*, *Green LA*, and *ClimateLA*, which are described in Section 3.5.1. As discussed under **VI(a)** above, the fuel consumption from construction vehicles and equipment would be temporary and would represent a negligible increase in regional energy consumption. In addition, the proposed Project includes various air quality and greenhouse gas BMPs and mitigation measures that would reduce energy consumption associated with the use of construction equipment. Therefore, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and the impacts would be less than significant.

3.5.3.4 Operational Impacts

VI(a): Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

Proposed Project features, such as park lighting, WiFi, security cameras, on-site buildings (café, concessions area, restrooms, and office), and electric vehicle charging station, would require electricity or natural gas for energy. Special events could require electricity to power sound and lighting equipment. In addition, proposed Project operation would include the consumption of diesel and gasoline fuel from on-road vehicles traveling to the Project Site.

Estimated operational energy use is summarized in **Table 3.5-5** and detailed calculations are provided in **Appendix B-14**. As shown in **Table 3.5-5**, the proposed Project would result in a net reduction in

energy consumption of approximately 15,015 MMBTU, or a decrease of approximately 61 percent, when compared with the energy consumption associated with the existing industrial land use.

Table 3.5-5: Estimated Operational Energy Use

Energy Source	Annual Energy Consumption	Annual MMBTU
Electricity	192,751 kWh	658
Natural Gas	197,732 kBTU	198
Mobile Fuel (Diesel)	25,628 gallons	3,521
Mobile Fuel (Gasoline)	40,698 gallons	4,901
Water Conveyance & Treatment	11 million gallons	432
	Total	9,709
	Total Existing Energy Use	24,724
	Net Change Compared to Existing Energy Use	-15,015 (-61%)

Energy calculations were quantified using the CalEEMod, v2016.3.2, computer program. The existing land use was classified as General Heavy Industry and the proposed land uses at the Project Site include the following: City Park (1.45 acre park), City Park (5.71 acre park) Fast Food Restaurant without Drive Thru (700 square foot café), Health Club (2,000 square foot buildings), City Park (two soccer fields), and City Park (one acre park special events).
MMBTU = million British thermal units; kWh = kilowatt hours; kBTU = kilo-British thermal unit
Source: (Ambient Air Quality & Noise Consulting, 2019)

The proposed Project would include improvements to active transportation options; design features that reduce energy use, water use, and waste generation (i.e., low-flow water fixtures, water-efficient irrigation systems, and high-efficiency lighting); and the conversion of industrial uses to open space uses, which would contribute to reductions in energy consumption. In addition, the proposed buildings would conform to the California Building Standards Code and Los Angeles Green Building Code to meet energy efficiency requirements. As such, the proposed Project would not result in a potentially significant impact due to wasteful, inefficient, or unnecessary consumption of energy features during operation. Therefore, impacts would be less than significant, and no mitigation is required.

VI(b): Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Applicable plans related to renewable energy or energy efficiency include the California Long-Term Energy Efficiency Strategic Plan, LADWP 2016 Power Integrated Resource Plan, *Sustainable City pLAn*, and *Green LA* and *ClimateLA*, which are described in Section 3.5.1. In comparison to the existing industrial uses that were removed, the proposed Project would result in an overall net reduction of long-term operational energy use of roughly 15,015 MMBTU, or 61 percent (see **Table 3.5-5**). Proposed Project features, including improvements to active transportation options; design features that reduce energy use, water use, and waste generation (i.e., low-flow water fixtures, water-efficient irrigation systems, and high-efficiency lighting); and the conversion of industrial uses to open space uses, would contribute to reductions in energy consumption. As a result of these energy-saving features, the proposed Project would be consistent with the goals outlined in state and local energy plans. Therefore, the project would

not conflict with or obstruct a state or local plan for renewable energy or energy efficiency and impacts would be less than significant.

3.5.4 Best Management Practices

There are no proposed BMPs specifically for Energy. With implementation of the BMPs identified in Section 3.2.4 (Air Quality) and Section 3.7.4 (Greenhouse Gas Emissions), construction-related energy use would be minimized to the greatest extent feasible.

3.5.5 Mitigation Measures

There are no proposed mitigation measures specifically for Energy. Implementation of the mitigation measures identified in Section 3.2.4 (Air Quality), would reduce impacts related to construction-related energy use. Impacts related to Energy would be less than significant.

3.5.6 Significant Unavoidable Adverse Impacts

There are no significant unavoidable adverse impacts on Energy resulting from implementation of the proposed Project.

3.5.7 Cumulative Impacts

Fuel consumption from construction activities would represent a negligible increase in regional energy consumption, while operation of the proposed Project would result in an overall net reduction of long-term energy use when compared to the existing industrial land use. Therefore, it is anticipated that existing energy service providers have adequate capacity to serve the energy demands of the proposed Project.

Growth and development in the Project Area are anticipated to contribute to increased demand for electricity, natural gas, and transportation energy. However, based on the 2016 Power Integrated Resource Plan, the City's increased energy demands are anticipated to be met with increased use of renewable energy sources, such as solar, wind, and geothermal power. In addition, increased transportation fuel demands would be minimized with improvements to the vehicle fuel economy pursuant to federal and state regulations and trends toward improving active transportation infrastructure (see Section 3.7, Greenhouse Gas Emissions for additional information). Like the proposed Project, other future transportation and development projects would be expected to incorporate energy conservation features, comply with applicable regulations related to energy use and efficiency, and incorporate BMPs and/or mitigation measures to reduce impacts related to energy. Therefore, the proposed Project would not result in cumulative impacts related to energy.

3.6 Geology and Soils

This section describes the affected environment and regulatory setting for Geology and Soils related to the Project Area. In addition, this section describes the potential impacts related to Geology and Soils that would result from the implementation of the proposed Project. As noted in the analysis below, impacts associated with Geology and Soils during the construction and operation of the proposed Project would be less than significant and no mitigation measures are required.

The analysis in this section is based on the Geotechnical Site Investigation report (Hushmand Associates, Inc., 2018) prepared for the proposed Project, which also incorporates findings from the *Foundation Report* prepared for the Viaduct Replacement Project (Earth Mechanics, Inc., 2016). In addition, the environmental setting and analysis in this section rely on information from the Paleontological Resource Assessment (Applied EarthWorks, 2019).

3.6.1 Regulatory Setting

A review of the various federal, state, regional, and local government regulatory requirements was conducted to identify regulations that relate to Geology and Soils. This section summarizes the various regulatory requirements that are relevant to the proposed Project.

3.6.1.1 Federal

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (PRC Section 2621.5) was passed to mitigate hazards of surface faulting on structures built for human occupancy (California Department of Conservation, 2018). The Alquist-Priolo Earthquake Fault Zoning Act's main purpose is preventing the construction of buildings used for human occupancy in active fault zones.

3.6.1.2 State

California Building Standards Code

The 2016 California Building Standards Code (CCR, Title 24), which went into effect on January 1, 2017, is included in the City's Municipal Code. The California Building Standards Code is based on the federal Uniform Building Code but has been modified to reflect the seismic and environmental conditions of California. The California Building Standards Code includes guidelines for building design and construction, and includes the following components: California Building, Residential, Electrical, Mechanical, Plumbing, Energy, Historical Building, Fire, Existing Building, and Green Building Codes.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (PRC Section 2690-2699.6) requires the identification and mapping of areas that are prone to liquefaction, earthquake-induced landslides, and amplified ground shaking (California Geological Survey, 2003b). The Seismic Hazards Mapping Act aims to minimize the loss of life and property by identifying seismic hazards and mitigation for these hazards.

3.6.1.3 Local

City of Los Angeles General Plan

As required by the State of California, the City's General Plan addresses goals, policies, and standards related to land use, circulation, housing, conservation, open space, noise, and safety (City of Los Angeles, 2017). To address goals that meet the unique needs of the City, the General Plan also includes elements related to health and wellness, air quality, historic preservation and cultural resources, and public facilities and services. Several of the General Plan elements are currently undergoing revision. The General Plan element that pertains to Geology and Soils is described in more detail in the following section.

Safety Element

The Safety Element of the City's General Plan addresses the protection of people from risks associated with natural disasters (City of Los Angeles, 1996). The Safety Element includes goals, objectives, and policies that guide the City's Emergency Operations Organization, which is the City's department responsible for emergency planning, training, and mitigation, as well as response and recovery operations. Chapter IV of the Safety Element describes areas within the City that are susceptible to fault rupture, liquefaction, and landslides, and includes standards related to seismic hazards. Specific policies pertaining to Geology and Soils include:

Hazard Mitigation

- **Policy 1.1.5**: Risk Reduction. Reduce potential risk hazards due to natural disaster to the greatest extent feasible within the resources available, including provision of information and training.

Conservation Element

The Conservation Element of the City of Los Angeles General Plan (adopted September 2001) primarily addresses preservation, conservation, protection and enhancement of the city's natural resources. The Conservation Element specifically addresses paleontological resources in Section 3 of Chapter 2.

With regard to paleontological resources, the Conservation Element contains the following objective with an associated policy and program:

- **Objective:** protect the city's archaeological and paleontological resources for historical, cultural, research and/or educational purposes.
- **Policy:** continue to identify and protect significant archaeological and paleontological sites and/or resources known to exist or that are identified during land development, demolition or property modification activities.
- **Program:** permit processing, monitoring, enforcement and periodic revision of regulations and procedures.
- **Responsibility:** departments of Building and Safety, City Planning and Cultural Affairs and/or the lead agency responsible for project implementation.

City of Los Angeles Building Code

The Los Angeles Building Code is a component of the City's Municipal Code (Chapter IX, Article 1). The Building Code aims to protect public health and property through regulating the design, construction, quality of materials, use and occupancy, and location and maintenance of buildings and structures proposed for development within the City. The Building Code includes requirements regarding the transport of material, excavation, fill materials, erosion control, and general construction activities.

3.6.2 Environmental Setting

3.6.2.1 Regional Geology

The Project Area is in the northern margin of the Los Angeles Basin (Basin), an actively subsiding basin bound by the Santa Monica Mountains and the Elysian, Repetto, and Puente Hills to the north, and the Santa Ana Mountains and San Joaquin Hills to the east and southeast (U.S. Geological Survey, 1965). The Basin is an alluviated lowland that gently slopes south towards the ocean and is interrupted by hills and mesas. The Basin is a northwest-trending structural depression and is filled with sedimentary formations of Tertiary and Cretaceous origin, overlain with Pleistocene and Holocene age alluvium.

3.6.2.2 Local Geologic Setting

According to the California Geological Survey (CGS) Seismic Hazard Zone Report for the Los Angeles 7.5-Minute Quadrangle (California Geological Survey, 1998), the Project Area is located in a region with Holocene age Quaternary alluvial deposits fan consisting of sand, silt, and gravel (Hushmand Associates, Inc., 2018). Based on the Foundation Report for the Viaduct Replacement Project (Earth Mechanics, Inc., 2016), the Project Area is underlain with:

- **Artificial Fill**: Generally, consists of disturbed and reworked alluvial sands, silts, and gravels, varying up to 15 feet thick in the Project Area, due to recent construction along the Los Angeles River.
- **Quaternary Alluvium**: Holocene to Pleistocene age alluvium consisting of active stream channel and unconsolidated floodplain deposits of gravel, sand, silt, and hardened remnants of older deposits.
- **Fernando Formation, Upper (Pico) and Lower (Repetto) Members**: Pliocene-age marine deposits consisting of tan to olive brown, semi-friable sandstone and conglomerate, in addition to gray to greenish gray, soft, poorly bedded marine claystone and siltstone.

3.6.2.3 Faulting, Seismicity, and Ground Shaking

The Project Area is located within a seismically active region, where several active faults could produce substantial shaking (California Department of Transportation and City of Los Angeles, 2011). There are no faults within the Project Area, but nearby active faults include Elysian Park (Lower CFM), Elysian Park (Upper), Puente Hills (LA), Hollywood, Raymond, Verdugo-Eagle Rock, Newport-Inglewood Fault Zone, and Elsinore Fault Zone (Whittier section), which range from 1.5 to 10.3 miles from the Project Area (Hushmand Associates, Inc., 2018).

According to the most recent Alquist-Priolo Earthquake Fault Zoning Map, there are no potentially active faults that pass through the Project Area (California Department of Conservation, 1977). There is no known surface expression of active faults within the Project Area. Therefore, the potential for a fault rupture through the Project Area is considered very low (Hushmand Associates, Inc., 2018).

According to California Geological Survey maps showing the earthquake shaking potential in California, there is a medium intensity of ground shaking and damage in the Project Area from anticipated future earthquakes (California Geological Survey, 2003a).

3.6.2.4 Subsurface Soils

Based on the borehole investigation, subsurface conditions consisted of about 5 to 20 feet of fill soils consisting of loose to medium dense silty sand to poorly graded sand with silt. The fill is underlain by generally dense to very dense coarse-grained materials comprising of sands, silty sands, gravelly sands, sandy gravels, cobbles, and possibly boulders (Hushmand Associates, Inc., 2018).

3.6.2.5 Expansive Soil

Expansive soil is soil that is prone to large volume changes (swelling and shrinking) that are directly related to changes in water content — with higher moisture levels, the soils will swell, and with lower moisture levels, the soils will shrink. According to Table 18-1-B of the California Building Code, a special foundation design is required if the Expansion Index (which predicts the swelling potential of compacted soils) is higher than 20. Based on a 1989 United States Geological Survey (USGS) map, the proposed Project is located in an area where data is insufficient to indicate the clay content and/or swelling potential of clay (U.S. Geological Survey, 1989). The Geotechnical Site Investigation did not include laboratory testing for expansive soils. However, the soils that were observed in the borehole investigation, as described in Section 3.6.2.4, are predominately gravels, sands, and cobbles, which tend to have a low potential for expansive soils. Clayey soils, on the other hand, can have a high expansion potential, but were not observed during borehole investigations (Hushmand Associates, Inc., 2018). Therefore, the potential for expansive soils in the Project Area is expected to be low.

3.6.2.6 Groundwater

Based on the Foundation Report for the Viaduct Replacement Project, measured groundwater elevations varied significantly throughout the Project Area and ranged from 170.9 to 228 feet below ground surface (bgs) (Earth Mechanics, Inc., 2015). Groundwater was not encountered in any of the boreholes performed during the investigations for the proposed Project (Hushmand Associates, Inc., 2018). This is likely because soil boring depths for the Viaduct Replacement Project, which varied from 3 to 200 feet bgs, were deeper than the boring depths for the proposed Project, which vary from 5.67 to 39.08 feet bgs (Earth Mechanics, Inc., 2015; Hushmand Associates, Inc., 2018). In addition, groundwater may fluctuate due to factors such as seasonal variation, nearby construction, irrigation, or other man-made and natural influences (Earth Mechanics, Inc., 2015).

3.6.2.7 Liquefaction Potential

Soil liquefaction occurs when a saturated or partially saturated soil substantially loses strength and stiffness in response to an applied stress, usually earthquake shaking or other sudden change in stress

condition, causing it to behave like a liquid. Other types of ground failure resulting from seismic activities include collapsible soils, subsidence (the gradual caving in or sinking of an area of land), landslides, and lateral spreading (landslides that commonly form on gentle slopes and that have rapid fluid-like flow movement). According to the most recent seismic hazards zones map, the proposed Project is not located in a liquefaction zone (see **Figure 3.6-1**, Seismic Hazards) (California Department of Conservation, 1999).

3.6.2.8 Paleontological Resources

To determine the paleontological sensitivity of geologic units underlying the Project Area, published geologic maps were reviewed. In November 2017, a records search was conducted by the Los Angeles County Museum of Natural History of known fossil localities in the area. Published reports on the regional geology and paleontology of the area were also reviewed (Norris & Webb, 1976; Springer et al., 2009; Yerkes & Campbell, 2005; U.S. Geological Survey, 1965).

Based on the literature review and museum records search results, the paleontological sensitivity was determined for the Project Area in accordance with the Society of Vertebrate Paleontology (SVP) (2010) sensitivity scale (Society of Vertebrate Paleontology, 2010). The near-surface Holocene-age alluvial deposits in the Project Area are likely too young to contain fossilized material. As such, these deposits are determined to have a low paleontological resource potential. Therefore, shallow excavations are unlikely to impact paleontological resources and further paleontological resource management is not recommended.

However, should Project-related ground-disturbance extend deeper into sensitive Pleistocene alluvial deposits or Pliocene rock formations buried at unknown depths within the Project Area and exposed at the ground surface nearby, further paleontological resource consultation may be required.

3.6.3 Environmental Impact Analysis

3.6.3.1 Screening Analysis

Several impacts and corresponding thresholds of significance in the following section were eliminated from further analysis in this EIR. Topics were eliminated if the Initial Study for the proposed Project concluded there would be "No Impact," or if impacts were identified to be "Less Than Significant… and will not be discussed further in the EIR." Therefore, only the topics described in the section below were determined to require further analysis in this EIR. A copy of the Initial Study, which contains the eliminated topics, is provided in **Appendix A**.

3.6.3.2 Thresholds of Significance

According to Appendix G of the State CEQA Guidelines and the *L.A. CEQA Thresholds Guide*, the proposed Project would have a significant impact on Geology and Soils if it would:

VII(b) Result in substantial soil erosion or the loss of topsoil.

VII(c) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

VII(f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

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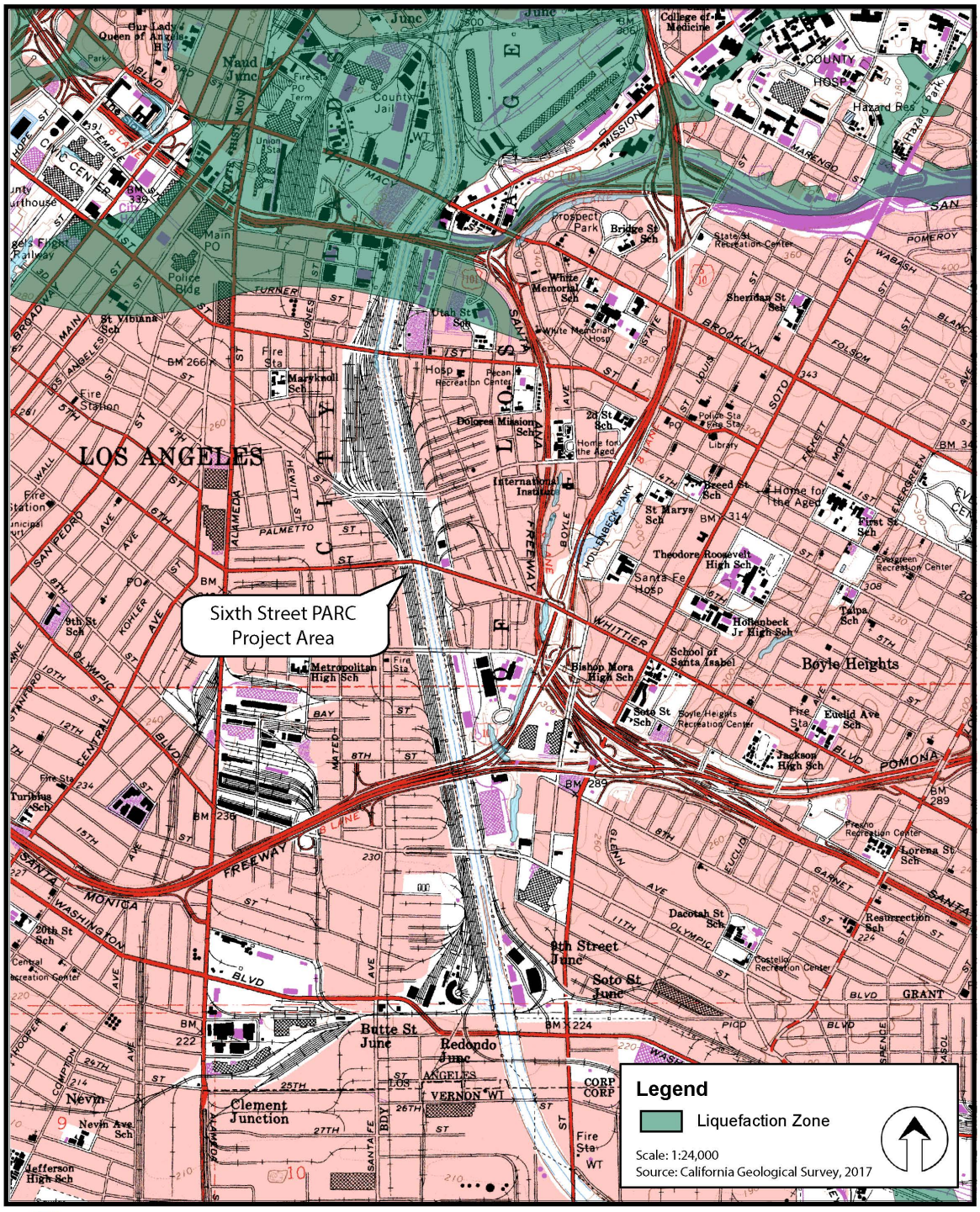
Figure 3.6-1: Seismic Hazards



ENGINEERING
CITY OF LOS ANGELES

FIGURE 3.6-1. SEISMIC HAZARDS
Sixth Street PARC Project

D.1 *Paleontological Resources.* The determination of significance shall be made on a case-by-case basis, considering the following factors:

- Whether, or the degree to which, the project might result in the permanent loss of, or loss of access to, a paleontological resource; and
- Whether the paleontological resource is of regional or statewide significance.

3.6.3.3 Construction Impacts

VII(b): Would the project result in substantial soil erosion or the loss of topsoil?

Soil excavation would be required during the construction of the proposed Project. Throughout the Project Area, excavation depths are expected to range up to 5 feet for general earthwork, 10 feet for construction of retaining walls, 15 feet for utility trenching, and 22 feet for the removal of portions of the existing LA River Access Tunnel and existing Viaduct foundations. Because artificial fill makes up the top 5 to 20 feet of topsoil, as described in the Geotechnical Site Investigation, a substantial loss of topsoil is not expected to occur.

During site preparation and other construction activities, the proposed Project could result in soil erosion. Standard Best Management Practices (BMPs), such as fiber rolls and silt fencing, would be implemented during construction to ensure that substantial erosion or the loss of topsoil would not occur, and that construction activities would not result in impacts to the LA River. All grading activities would comply with permits from the Department of Building and Safety, and with the provisions of the City's Building Code (Municipal Code Chapter IX, Article 1). With implementation of BMPs, impacts would be less than significant and no mitigation is required.

VII(c): Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Because the proposed Project is located in an area with little or no swelling clay, substantial risks to life or property are not anticipated. However, the Project Area is underlain with fill material which could expand when saturated. Hazards would be reduced by following standard engineering practices, as well as the recommendations identified in the Geotechnical Site Investigation (Hushmand Associates, Inc., 2018). The report recommends that backfill soils would be moisture-conditioned and recompacted to meet American Section of the International Association for Testing Materials (ASTM) standards to counteract the potential adverse effects of soil expansiveness. In addition, the report recommends that if import soils are used, the import soil should not exhibit an Expansion Index greater than 20 or contain more than 35 percent fines (i.e., fine-grained soils), and should be screened by the geotechnical engineer to meet ASTM International standards (Hushmand Associates, Inc., 2018). By following these recommendations, impacts would be less than significant and no mitigation is required.

VII(f): Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Results of the paleontological assessment indicate there are no significant resources that would be affected by the construction of the Project as presently proposed.

In the event that an unanticipated fossil discovery is made during proposed Project construction, in accordance with SVP (2010) guidelines, a qualified professional Paleontologist should be retained to examine the find and to determine if further paleontological resources mitigation is warranted (Society of Vertebrate Paleontology, 2010). The following management recommendation measures have been used by professional paleontologists for many years and have proven to be effective in reducing or eliminating adverse impacts to paleontological resources to a less than significant level pursuant to the requirements of CEQA. Prior to the start of construction within a given development site within the Project Area, all field personnel should be briefed regarding the types of fossils that could be found and the procedures to follow should paleontological resources be encountered. Specifically, the training should provide a description of the fossil resources that may be encountered, outline steps to follow when a fossil discovery is made and provide contact information for the Qualified Paleontologist and on-site monitor(s). The training should be developed by the Qualified Paleontologist and provided as hand-outs or a Power Point Presentation that can be presented concurrently with other environmental training (e.g., cultural and natural resources awareness training, safety training, etc.). As determined by the Qualified Paleontologist, construction Monitoring would not be required in the Project Area because of previous disturbance or the shallow, younger alluvial deposits.

With compliance with SVP (2010) guidelines (see **BMP-PAL-1** and **BMP-PAL-2**), impacts to paleontological resources would be less than significant and no mitigation measures are required.

3.6.3.4 Operational Impacts

VII(b): Would the project result in substantial soil erosion or the loss of topsoil?

The proposed Project would feature changes in elevation; however much of the 13-acre site would be a mix of vegetation, hardscape and park amenities. In the LA River channel, reinforced concrete planted terraces would be anchored into the existing slope liner on the west and east banks. Because the topography of the Project Area is relatively flat, and open spaces would be landscaped or hardscaped, substantial soil erosion and loss of topsoil are not anticipated. Therefore, impacts would be less than significant and no mitigation is required.

VII(c): Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

See Section 3.6.3.3 above for a discussion of impacts related to expansive soils.

VII(f): Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Operation of the proposed Project would not involve any ground-disturbing activities. Therefore, there would be no potential to disturb, damage, or degrade a paleontological resource or its setting. No operational impacts on paleontological resources would occur and no mitigation measures are required.

3.6.4 Best Management Practices

BMP-GEO-1: Erosion Control

The contractor shall implement standard BMPs, such as the use of fiber rolls and silt fencing, to reduce the amount of dust and dirt from leaving the construction area.

BMP-GEO-2: Geotechnical Site Investigation Recommendations

The Geotechnical Site Investigation report for the proposed Project includes recommendations to ensure that the Project Area is suitable for construction, and to ensure that appropriate measures are taken to reduce impacts during earthwork, excavation, utility trenching, backfilling, and other construction activities (Hushmand Associates, Inc., 2018). Backfill soils shall be moisture-conditioned and recompacted to meet ASTM International standards to counteract the potential adverse effects of soil expansiveness. If import soils are used, the import soil shall not exhibit an Expansion Index greater than 20 or contain more than 35 percent fines (i.e., fine-grained soils), and shall be screened by the geotechnical engineer to meet ASTM International standards.

BMP-PAL-1: Paleontological Sensitivity Training

Prior to the start of construction, all field personnel shall be briefed regarding the types of fossils that could be found and the procedures to follow should paleontological resources be encountered. Specifically, the training shall provide a description of the fossil resources that may be encountered, outline steps to follow when a fossil discovery is made, and provide contact information for a qualified paleontologist. The training shall be developed by a qualified paleontologist and provided as hand-outs or a PowerPoint Presentation that may be presented concurrently with other pre-construction training.

BMP-PAL-2: Unanticipated Paleontological Resource Discoveries

In the event that an unanticipated fossil discovery is made during construction, a qualified professional paleontologist shall be retained to examine the find and to determine whether further paleontological resource mitigation is warranted in accordance with SVP (2010) guidelines.

3.6.5 Mitigation Measures

Impacts related to Geology and Soils would be less than significant; therefore, mitigation measures are not required.

3.6.6 Significant Unavoidable Adverse Impacts

There are no significant unavoidable adverse impacts on Geology and Soils resulting from the implementation of the proposed Project.

3.6.7 Cumulative Impacts

Impacts related to Geology and Soils would be localized to the Project Area. Construction of other development projects in the Project Area listed in **Table 1-1**, could result in Geology and Soils impacts; however, these impacts are not expected to be cumulative because they would be site-specific.

The proposed Project and related projects would not change the geologic properties of the area and would not increase seismic or other geologic risks in the region. Like the proposed Project, all proposed development projects would be subject to seismic standards, safety requirements, standard design practices, and BMPs to minimize potential risks from seismic or other geologic hazards. Projects would also be required to implement standard engineering practices and BMPs to minimize the potential for erosion or loss of topsoil. In addition, all grading activities would be required to comply with the LA City Department of Building and Safety Permits, which would include the provisions of the City's Building Code. Therefore, the proposed Project would not result in cumulative impacts related to Geology and Soils.

In the event that potentially significant buried paleontological materials are encountered within the Project Area, all work in the vicinity must be halted until a qualified paleontologist can visit the site of discovery and assess the significance of the paleontological resource. Impacts to paleontological resources would be less than significant. It is expected that related projects and other future development would also be required to comply with applicable regulatory requirements and include similar best management practices. Therefore, the proposed Project would not result in cumulative impacts on paleontological resources.

3.7 Greenhouse Gas Emissions

This section describes the affected environment and regulatory setting for greenhouse gas (GHG) emissions related to the Project Area. In addition, this section describes the potential impacts related to GHG emissions that would result from the implementation of the proposed Project. As noted in the analysis below, impacts associated with GHG emissions during the construction and operation of the proposed Project would be less than significant.

The information in this section is based on the *Air Quality and Greenhouse Gas Impact Assessment* (Ambient Air Quality & Noise Consulting, 2019) prepared for the proposed Project. Air quality and greenhouse gas emissions were generated for an opening year of 2021 (Ambient Air Quality & Noise Consulting, 2019). Due to project delays, it is now anticipated that the park will open in 2024. There is not anticipated to be a substantial difference in projected emissions from 2021 to 2024 and emissions in 2024 may be slightly lower in 2024 due to continual improvement in vehicle and equipment emission standards.

3.7.1 Regulatory Setting

A review of the various federal, state, regional, and local government regulatory requirements was conducted to identify regulations that relate to GHG emissions. This section summarizes the various regulatory requirements that are relevant to the proposed Project.

3.7.1.1 Federal

Executive Order 13514

Executive Order 13514 is focused on reducing GHG emissions internally in federal agency missions, programs, and operations. In addition, the executive order directs federal agencies to participate in the Interagency Climate Change Adaptation Task Force, which is engaged in developing a national strategy for adaptation to climate change.

On April 2, 2007, in Massachusetts v. U.S. Environmental Protection Agency (U.S. EPA), 549 U.S. 497 (2007), the Supreme Court found that GHGs are air pollutants covered by the Federal Clean Air Act (FCAA) and that the U.S. EPA has the authority to regulate GHG. The Court held that the U.S. EPA Administrator must determine whether or not emissions of GHGs from new motor vehicles cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision.

On December 7, 2009, the U.S. EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the FCAA:

- Endangerment Finding: The Administrator found that the current and projected concentrations of the six key well-mixed GHGs (carbon dioxide [CO_2], methane [CH_4], nitrous oxide [N_2O], hydrofluorocarbons [HFC], perfluorocarbons [PFC], and sulfur hexafluoride [SF_6]) in the atmosphere threaten the public health and welfare of current and future generations.

- Cause or Contribute Finding: The Administrator found that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.

Although these findings did not themselves impose any requirements on industry or other entities, this action was a prerequisite to finalizing the U.S. EPA's Proposed Greenhouse Gas Emission Standards for Light-Duty Vehicles, which was published on September 15, 2009. On May 7, 2010, the final Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards were published in the Federal Register.

U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever GHG regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle GHG regulations. These steps were outlined by President Obama in a Presidential Memorandum on May 21, 2010.

The final combined U.S. EPA and NHTSA standards that make up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile (the equivalent to 35.5 miles per gallon if the automobile industry were to meet this CO_2 level solely through fuel economy improvements). Together, these standards will cut GHG emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016). On August 28, 2012, U.S. EPA and NHTSA issued their joint rule to extend this national program of coordinated GHG and fuel economy standards to model years 2017 through 2025 passenger vehicles.

3.7.1.2 State

Assembly Bill 1493

Assembly Bill (AB) 1493 (Pavley) of 2002 (Health and Safety Code Sections 42823 and 43018.5) requires the California Air Resources Board (CARB) to develop and adopt the nation's first GHG emission standards for automobiles. These standards are also known as Pavley I. The California Legislature declared in AB 1493 that global warming is a matter of increasing concern for public health and the environment. It cites several risks that California faces from climate change, including a reduction in the State's water supply, an increase in air pollution caused by higher temperatures, harm to agriculture, an increase in wildfires, damage to the coastline, and economic losses caused by higher food, water, energy, and insurance prices. The bill also states that technological solutions to reduce GHG emissions would stimulate California's economy and provide jobs. In 2004, the State of California submitted a request for a waiver from federal clean air regulations, as the State is authorized to do under the FCAA, to allow the State to require reduced tailpipe emissions of CO_2. In late 2007, the U.S. EPA denied California's waiver request and declined to promulgate adequate federal regulations limiting GHG emissions. In early 2008, the State brought suit against the U.S. EPA related to this denial.

In January 2009, President Obama instructed the U.S. EPA to reconsider the Bush Administration's denial of California's and 13 other states' requests to implement global warming pollution standards for cars

and trucks. In June 2009, the U.S. EPA granted California's waiver request, enabling the State to enforce its GHG emissions standards for new motor vehicles beginning with the current model year.

In 2009, President Obama also announced a national policy aimed at both increasing fuel economy and reducing GHG pollution for all new cars and trucks sold in the United States. The new standards would cover model years 2012 to 2016 and would raise passenger vehicle fuel economy to a fleet average of 35.5 miles per gallon by 2016. California has committed to allowing automakers who show compliance with the national program to also be deemed in compliance with State requirements. California is committed to further strengthening these standards beginning in 2017 to obtain a 45 percent GHG reduction from the 2020 model year vehicles in comparison to the 2009 model year.

Executive Order No. S-3-05

Executive Order S-3-05 (State of California) proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total GHG emission targets. Specifically, emissions are to be reduced to the 2000 level by 2010, to the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

The Executive Order directed the secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The secretary will also submit biannual reports to the governor and State legislature describing (1) progress made toward reaching the emission targets, (2) impacts of global warming on California's resources, and (3) mitigation and adaptation plans to combat these impacts. To comply with the Executive Order, the secretary of CalEPA created a Climate Action Team made up of members from various state agencies and commissions. The Climate Action Team released its first report in March 2006 and continues to release periodic reports on progress. The report proposed to achieve the targets by building on voluntary actions of California businesses, local government and community actions, as well as through State incentive and regulatory programs.

Assembly Bill 32 – California Global Warming Solutions Act of 2006

AB 32 (Health and Safety Code Sections 38500, 38501, 28510, 38530, 38550, 38560, 38561–38565, 38570, 38571, 38574, 38580, 38590, 38592–38599) requires that Statewide GHG emissions be reduced to 1990 levels by the year 2020. The gases that are regulated by AB 32 include CO_2, CH_4, N_2O, HFCs, PFCs, nitrogen trifluoride (NF_3), and SF_6. The reduction to 1990 levels will be accomplished through an enforceable statewide cap on GHG emissions that were phased in starting in 2012. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce Statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires that CARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrives at the cap, institute a schedule to meet the emissions cap, and develop tracking, reporting, and enforcement mechanisms to ensure that the State achieves reductions in GHG

emissions necessary to meet the cap. AB 32 also includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

Climate Change Scoping Plan

In October 2008, CARB published its Climate Change Proposed Scoping Plan, which is the State's plan to achieve GHG reductions in California required by AB 32. This initial Scoping Plan contained the main strategies to be implemented in order to achieve the target emission levels identified in AB 32. The Scoping Plan included CARB-recommended GHG reductions for each emissions sector of the State's GHG inventory. The largest proposed GHG reduction recommendations were associated with improving emissions standards for light-duty vehicles, implementing the Low Carbon Fuel Standard program, incorporating energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems, and developing a renewable portfolio standard for electricity production.

The Scoping Plan states that land use planning and urban growth decisions will play important roles in the State's GHG reductions because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions. CARB further acknowledges that decisions on how land is used will have large impacts on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emissions sectors. With regard to land use planning, the Scoping Plan expects approximately 5.0 million metric tons of carbon dioxide equivalents ($MMTCO_2e$) will be achieved associated with implementation of Senate Bill 375, which is discussed further below.

The initial Scoping Plan was first approved by CARB on December 11, 2008, and is updated every five years. The first update of the Scoping Plan was approved by the CARB on May 22, 2014, which looked past 2020 to set mid-term goals (2030-2035) on the road to reaching the 2050 goals. The most recent update released by CARB is the 2017 Climate Change Scoping Plan, which was released in November 2017. The 2017 Climate Change Scoping Plan incorporates strategies for achieving the 2030 GHG-reduction target established in Senate Bill (SB) 32 and Executive Order B-30-15.

California Renewables Portfolio Standards (Senate Bill 1078 and Governor's Order S-14-08)

SB 1078 (Public Utilities Code Sections 387, 390.1, 399.25 and Article 16) addresses electricity supply and requires that retail sellers of electricity, including investor-owned utilities and community choice aggregators, provide a minimum 20 percent of their supply from renewable sources by 2017. This Senate Bill will affect Statewide GHG emissions associated with electricity generation. In 2008, Governor Schwarzenegger signed Executive Order S-14-08, which set the Renewables Portfolio Standard target to 33 percent by 2020. It directed state government agencies and retail sellers of electricity to take all appropriate actions to implement this target. Executive Order S-14-08 was later superseded by Executive Order S-21-09 on September 15, 2009. Executive Order S-21-09 directed the CARB to adopt regulations requiring 33 percent of electricity sold in the State come from renewable energy by 2020. Statute SB X1-2 superseded this Executive Order in 2011, which obligates all California electricity providers, including investor-owned utilities and publicly owned utilities, to obtain at least 33 percent of their energy from renewable electrical generation facilities by 2020.

CARB is required by current law, AB 32 of 2006, to regulate sources of GHGs to meet a State goal of reducing GHG emissions to 1990 levels by 2020 and an 80 percent reduction of 1990 levels by 2050. The California Energy Commission and California Public Utilities Commission serve in advisory roles to help CARB develop the regulations to administer the 33 percent by 2020 requirement. CARB is also authorized to increase the target and accelerate and expand the time frame.

SB 350 (Chapter 547, Statues of 2015) further increased the Renewables Portfolio Standard to 50 percent by 2030. The legislation also included interim targets of 40 percent by 2024 and 45 percent by 2027. SB 350 was signed into law on October 7, 2015.

Mandatory Reporting of GHG Emissions

The California Global Warming Solutions Act (AB 32, 2006) requires reporting of GHGs by major sources to the CARB. Major sources required to report GHG emissions include industrial facilities, suppliers of transportation fuels, natural gas, natural gas liquids, liquefied petroleum gas, and carbon dioxide, operators of petroleum and natural gas systems, and electricity retail providers and marketers.

Cap-and-Trade Regulation

The cap-and-trade regulation is a key element in California's climate plan. It sets a statewide limit on sources responsible for 85 percent of California's GHG emissions and establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The cap-and-trade rules came into effect on January 1, 2013, and apply to large electric power plants and large industrial plants. In 2015, fuel distributors, including distributors of heating and transportation fuels, also became subject to cap-and-trade. At that stage, the program was predicted to encompass around 360 businesses throughout California and nearly 85 percent of the State's total GHG emissions.

Under the cap-and-trade regulation, companies must hold enough emission allowances to cover their emissions and are free to buy and sell allowances on the open market. California held its first auction of GHG allowances on November 14, 2012, which was followed by seven jurisdiction-specific quarterly GHG allowance auctions until August 18, 2014. The first joint auction with Québec's Ministry of Sustainable Development, Environment and the Fight against Climate Change was held on November 25, 2014. California's GHG cap-and-trade system is projected to reduce GHG emissions to 1990 levels by the year 2020 and would achieve an approximate 80 percent reduction from 1990 levels by 2050.

Senate Bill 32

SB 32 was signed by Governor Brown on September 8, 2016. SB 32 effectively extends California's GHG emission-reduction goals from year 2020 to year 2030. This new emission-reduction target of 40 percent below 1990 levels by 2030 is intended to promote further GHG-reductions in support of the State's ultimate goal of reducing GHG emissions by 80 percent below 1990 levels by 2050. SB 32 also directs the CARB to update the Climate Change Scoping Plan to address this interim 2030 emission-reduction target.

Senate Bill 375

SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) that will address land use allocation in that MPOs regional transportation plan. CARB, in consultation with MPOs, establishes regional reduction targets for GHGs emitted by passenger cars and light trucks for the years 2020 and 2035. These reduction targets

are scheduled to be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, funding for transportation projects may be withheld.

California Building Code

The California Building Code (CBC) contains standards that regulate the method of use, properties, performance, or types of materials used in the construction, alteration, improvement, repair, or rehabilitation of a building or other improvement to real property. The CBC is adopted every three years by the Building Standards Commission (BSC). In the interim, the BSC also adopts annual updates to make necessary mid-term corrections. The CBC standards apply statewide; however, a local jurisdiction may amend a CBC standard if it makes a finding that the amendment is reasonably necessary due to local climatic, geological, or topographical conditions.

Green Building Standards

In essence, green buildings standards are indistinguishable from any other building standards. Both standards are contained in the CBC and regulate the construction of new buildings and improvements. The only practical distinction between the two is that whereas the focus of traditional building standards has been protecting public health and safety, the focus of green building standards is to improve environmental performance.

AB 32, which mandates the reduction in GHG emissions in California to 1990 levels by 2020, increased the urgency around the adoption of green building standards. In its scoping plan for the implementation of AB 32, CARB identified energy use as the second largest contributor to California's GHG emissions, constituting roughly 25 percent of all such emissions. In recommending a green building strategy as one element of the scoping plan, CARB estimated that green building standards would reduce GHG emissions by approximately 26 $MMTCO_2e$ by 2020. The green buildings standards were most recently updated in 2016.

Senate Bill 97

SB 97 was enacted in 2007. SB 97 required OPR to develop, and the Natural Resources Agency to adopt, amendments to the CEQA Guidelines addressing the analysis and mitigation of GHG emissions. Those CEQA Guidelines amendments clarified several points, including the following:

- Lead agencies must analyze the GHG emissions of proposed projects and must reach a conclusion regarding the significance of those emissions.
- When a project's GHG emissions may be significant, lead agencies must consider a range of potential mitigation measures to reduce those emissions.
- Lead agencies must analyze potentially significant impacts associated with placing projects in hazardous locations, including locations potentially affected by climate change.
- Lead agencies may significantly streamline the analysis of GHGs on a project level by using a programmatic GHG emissions reduction plan meeting certain criteria.

- CEQA mandates analysis of a proposed project's potential energy use (including transportation-related energy), sources of energy supply, and ways to reduce energy demand, including through the use of efficient transportation alternatives.

As part of the administrative rulemaking process, the California Natural Resources Agency developed a Final Statement of Reasons explaining the legal and factual bases, intent, and purpose of the CEQA Guidelines amendments. The amendments to the CEQA Guidelines implementing SB 97 became effective on March 18, 2010.

Short-Lived Climate Pollutant Reduction Strategy

In March 2017, the CARB adopted the Short-Lived Climate Pollutant Reduction Strategy (SLCP Strategy), establishing a path to decrease GHG emissions and displace fossil-based natural gas use. Strategies include avoiding landfill methane emissions by reducing the disposal of organics through edible food recovery, composting, in-vessel digestion, and other processes; and recovering methane from wastewater treatment facilities, and manure methane at dairies, and using the methane as a renewable source of natural gas to fuel vehicles or generate electricity. The SLCP Strategy also identifies steps to reduce natural gas leaks from oil and gas wells, pipelines, valves, and pumps to improve safety, avoid energy losses, and reduce methane emissions associated with natural gas use. The SLCP Strategy identifies measures that can reduce HFC emissions at national and international levels. Lastly, the SLCP identifies State-level actions, including an incentive program to encourage the use of low-Global Warming Potential (GWP) refrigerants and limitations on the use of high-GWP refrigerants in new refrigeration and air-conditioning equipment (California Air Resources Board, 2017a).

3.7.1.3 Regional

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. Under federal law, SCAG is designated as a MPO and under State law as a Regional Transportation Planning Agency and a Council of Governments.

On September 3, 2020, SCAG adopted Connect SoCal: The 2020-2045 RTP/SCS (Southern California Association of Governments, 2020). The RTP is a long-range transportation plan that provides a vision for regional transportation investments over a period of 20 years or more. The SCS is an element of the RTP that demonstrates the integration of land use, transportation strategies, and transportation investments within the Plan. This requirement was put in place by the passage of SB 375, with the goal of ensuring that the SCAG region can meet its regional GHG reduction targets set by the CARB. In comparison to year 2005 levels, the SCS would result in an eight percent reduction in GHG emissions per capita by 2020, an 18 percent reduction by 2035, and a 21 percent reduction by 2040. This meets or exceeds the State's mandated reductions, which are eight percent by 2020 and 13 percent by 2035. SCAG is also responsible under the FCAA for determining federal air quality conformity of projects, plans, and programs within the South Coast Air Quality Management District (SCAQMD).

The 2020-2045 RTP/SCS would also help to reduce vehicle delay and vehicle miles traveled (VMT) within the region. On a per capita basis, vehicle delay would be reduced by roughly 26 percent, and heavy-duty

truck delay on highways 24 percent. VMT per capita would be reduced by five percent and vehicle hours traveled (VHT) would be reduced by approximately nine percent per capita (Southern California Association of Governments, 2020).

South Coast Air Quality Management District

The SCAQMD is the agency responsible for regulating air pollution in the South Coast Air Basin, which includes the Greater Los Angeles Region. The SCAQMD adopted a "Policy on Global Warming and Stratospheric Ozone Depletion" on April 6, 1990. The policy commits the SCAQMD to consider global impacts in rulemaking and in drafting revisions to the Air Quality Management Plan. More recently, in 2008, the Climate Change Policy was approved by the SCAQMD's Governing Board. The Climate Change Policy directs the agency's efforts on the reduction of GHG emissions and also established the SCAQMD's role in emerging GHG-reduction programs. Complementary to the Climate Change Policy, the Governing Board approved a Green Policy in 2009. The Green Policy is intended to help reduce the agency's carbon footprint from building operations, purchases, and employee work-related activities. The Green Policy also established a "Green Team" to evaluate potential practices, purchases, and other actions that can help to further reduce GHG emissions.

3.7.1.4 Local

City of Los Angeles

Green LA and *ClimateLA*

In May 2007, the City published *Green LA: An Action Plan to Lead the Nation in Fighting Global Warming*, which included more than fifty specific climate mitigation actions designed to reduce the City's contributions to climate change, and to prepare a response to the changes that have already begun to occur (City of Los Angeles, 2007). City departments worked together to respond to the recommendations set forth in the *Green LA* action plan, resulting in *ClimateLA*. *ClimateLA* is an implementation program that provides detailed information about each action item discussed in the *Green LA* framework. While the *ClimateLA* program focuses on mitigation, many of the adaptation measures addressed in *ClimateLA* are considered in this report, such as managing urban heat. Some of the adaptive action items recommended include making Los Angeles a worldwide leader in green buildings, decreasing per-capita water use, and implementing a city-wide climate change education program. Information about proposed and/or ongoing programs, opportunities for achieving the City's goals, specific challenges, and a list of milestones is provided for each action item. In the near future, the City aims to prioritize adaptation to climate change and include adaptation goals in departmental action plans.

City of Los Angeles Green Building Code

To achieve goals outlined in *Green LA*, in April 2008, the City adopted the Green Building Program Ordinance to address the impact on climate change from new development, which was amended for consistency with the CalGreen Building Code in 2011. As of January 1, 2011, all new buildings (residential and non-residential) would be subject to the Los Angeles Green Building Code (LAGBC), which is based on the 2013 CalGreen Standards to increase energy efficiency and reduce waste (City of LA Department of Building and Safety, 2017).

Sustainable City pLAn

In April 2015, Mayor Eric Garcetti introduced the Sustainable City pLAn. An updated annual report, titled L.A.'s Green New Deal, was released in 2019 (Office of the Los Angeles Mayor, 2019). The plan consists of 47 targets with milestones and initiatives for a cleaner environment and a stronger economy. These target categories include renewable energy, local water, clean and healthy buildings, housing and development, mobility and public transit, zero emission vehicles, industrial emissions and air quality monitoring, waste and resource recovery, food systems, urban ecosystems and resilience, environmental justice, prosperity, and green jobs, and lead by example.

3.7.2 Environmental Setting

To fully understand global climate change, it is important to recognize the naturally occurring "greenhouse effect" and to define the GHGs that contribute to this phenomenon. Various gases in the earth's atmosphere, classified as atmospheric GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space and a portion of the radiation is absorbed by the earth's surface. The earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation. GHGs, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

GWP was developed to compare global warming impacts associated with various gases. GWP is the measure of the total energy that one ton of gas absorbs over a particular period of time (usually 100 years), compared to one ton of CO_2 (U.S. Environmental Protection Agency, 2017). Primary GHGs attributed to global climate change, are discussed, as follows:

- **Carbon Dioxide:** CO_2 is a colorless, odorless gas. CO_2 is emitted in a number of ways, both naturally and through human activities. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO_2 emissions. The atmospheric lifetime of CO_2 is variable because it is so readily exchanged in the atmosphere (U.S. Environmental Protection Agency, 2019).
- **Methane:** CH_4 is a colorless, odorless gas that is not flammable under most circumstances. CH_4 is the major component of natural gas, about 87 percent by volume. It is also formed and released into the atmosphere by biological processes occurring in anaerobic environments. Methane is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (enteric fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of methane into the atmosphere. Natural sources of methane include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources

such as wildfires. Methane's atmospheric lifetime is about 12 years (U.S. Environmental Protection Agency, 2019).

- **Nitrous Oxide:** N_2O is a clear, colorless gas with a slightly sweet odor. N_2O is produced by both natural and human-related sources. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N_2O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 114 years (U.S. Environmental Protection Agency, 2019).
- **Hydrofluorocarbons:** HFCs are man-made chemicals, many of which have been developed as alternatives to ozone-depleting substances for industrial, commercial, and consumer products. The only significant emissions of HFCs before 1990 were of the chemical HFC-23, which is generated as a byproduct of the production of HCFC-22 (or Freon 22, used in air conditioning applications). The atmospheric lifetime for HFCs varies from just over a year for HFC-152a to 270 years for HFC-23. Most of the commercially used HFCs have atmospheric lifetimes of less than 15 years (e.g., HFC-134a, which is used in automobile air conditioning and refrigeration, has an atmospheric life of 14 years) (U.S. Environmental Protection Agency, 2019).
- **Perfluorocarbons:** PFCs are colorless, highly dense, chemically inert, and nontoxic. There are seven PFC gases: perfluoro methane (CF_4), perfluoro ethane (C_2F_6), perfluoro propane (C_3F_8), perfluoro butane (C_4F_{10}), perfluorocyclobutane (C_4F_8), perfluoro pentane (C_5F_{12}), and perfluoro hexane (C_6F_{14}). Natural geological emissions have been responsible for the PFCs that have accumulated in the atmosphere in the past; however, the largest current source is aluminum production, which releases CF_4 and C_2F_6 as byproducts. The estimated atmospheric lifetimes for PFCs range from 2,500 to 50,000 years (U.S. Environmental Protection Agency, 2019).
- **Nitrogen Trifluoride:** NF_3 is an inorganic, colorless, odorless, toxic, nonflammable gas used as an etchant in microelectronics. Nitrogen trifluoride is predominantly employed in the cleaning of the plasma-enhanced chemical vapor deposition chambers in the production of liquid crystal displays and silicon-based thin film solar cells. It has a GWP of 16,100 carbon dioxide equivalents (CO_2e). While NF_3 may have a lower GWP than other chemical etchants, it is still a potent GHG. In 2009, NF_3 was listed by California as a high GWP GHG to be listed and regulated under AB 32 (Section 38505 Health and Safety Code).
- **Sulfur Hexafluoride:** SF_6 is an inorganic compound that is colorless, odorless, nontoxic, and generally nonflammable. SF_6 is primarily used as an electrical insulator in high voltage equipment. The electric power industry uses roughly 80 percent of all SF_6 produced worldwide. Leaks of SF_6 occur from aging equipment and during equipment maintenance and servicing. SF_6 has an atmospheric life of 3,200 years (U.S. Environmental Protection Agency, 2019).
- **Black Carbon:** Black carbon is the strongest light-absorbing component of particulate matter (PM) emitted from burning fuels such as coal, diesel, and biomass. Black carbon contributes to climate change both directly by absorbing sunlight and indirectly by depositing on snow and by interacting with clouds and affecting cloud formation. Black carbon is considered a short-lived species, which can vary spatially and, consequently, it is very difficult to quantify associated global-warming

potentials. The main sources of black carbon in California are wildfires, off-road vehicles (locomotives, marine vessels, tractors, excavators, dozers, etc.), on-road vehicles (cars, trucks, and buses), fireplaces, agricultural waste burning, and prescribed burning (planned burns of forest or wildlands) (Climate & Clean Air Coalition, n.d.; U.S. Environmental Protection Agency, 2019).

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. Often, estimates of GHG emissions are presented in CO_2e, which weight each gas by its GWP. Expressing GHG emissions in CO_2e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted. **Table 3.7-1** provides a summary of the GWP for GHG emissions of typical concern with regard to community development projects, based on a 100-year time horizon. As indicated, CH_4 traps over 25 times more heat per molecule than CO_2, and N_2O absorbs roughly 298 times more heat per molecule than CO_2. Additional GHG with high GWP include NF_3, SF_6, PFCs, and black carbon.

Table 3.7-1: Global Warming Potential for Greenhouse Gases

Greenhouse Gas	Global Warming Potential (100-Year)
Carbon Dioxide (CO_2)	1
Methane (CH_4)	28-36
Nitrous Oxide (N_2O)	265-298

Source: (U.S. Environmental Protection Agency, 2017)

3.7.2.1 Sources of GHG Emissions

On a global scale, GHG emissions are predominantly associated with activities related to energy production; changes in land use, such as deforestation and land clearing; industrial sources; agricultural activities; transportation; waste and wastewater generation; and commercial and residential land uses. Worldwide, energy production including the burning of coal, natural gas, and oil for electricity and heat is the largest single source of global GHG emissions (U.S. Environmental Protection Agency, 2019).

In 2016, GHG emissions within California totaled 429 million metric tons (MMT) of CO_2e. GHG emissions, by sector, are summarized in **Figure 3.7-1,** California GHG Emissions Inventory by Scoping Plan Sector. Within California, the transportation sector is the largest contributor, accounting for approximately 39 percent of the total statewide GHG emissions. Emissions associated with industrial uses are the second largest contributor, totaling roughly 21 percent. Electricity generation totaled roughly 16 percent (California Air Resources Board, 2018b).

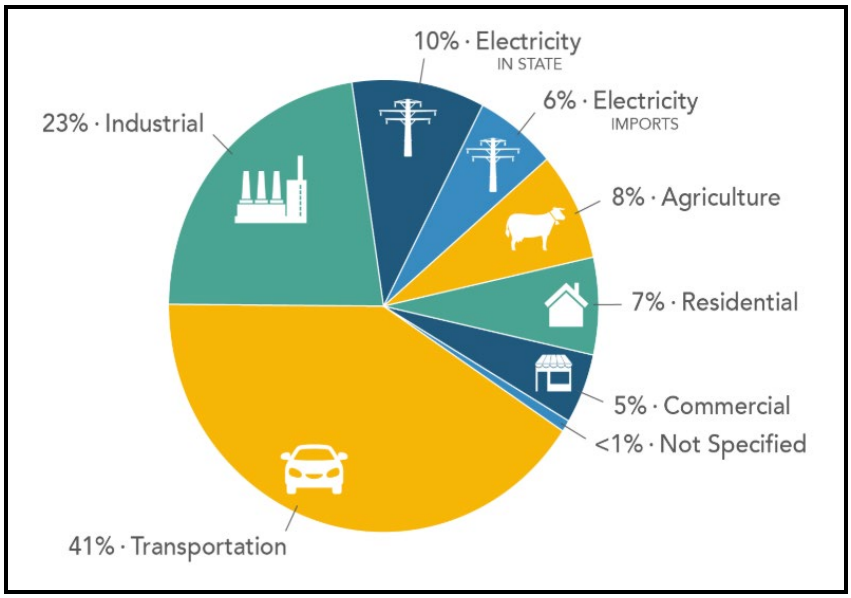
Short-Lived Climate Pollutants

Short-lived climate pollutants (SLCPs), such as black carbon, fluorinated gases, and methane also have a dramatic effect on climate change. Though short lived, these pollutants create a warming influence on the climate that is many times more potent than that of carbon dioxide.

As part of the CARB's efforts to address SLCPs, the CARB has developed a statewide emission inventory for black carbon. The black carbon inventory will help support implementation of the SLCP Strategy, but it is not part of the State's GHG Inventory that tracks progress towards the State's climate targets. The

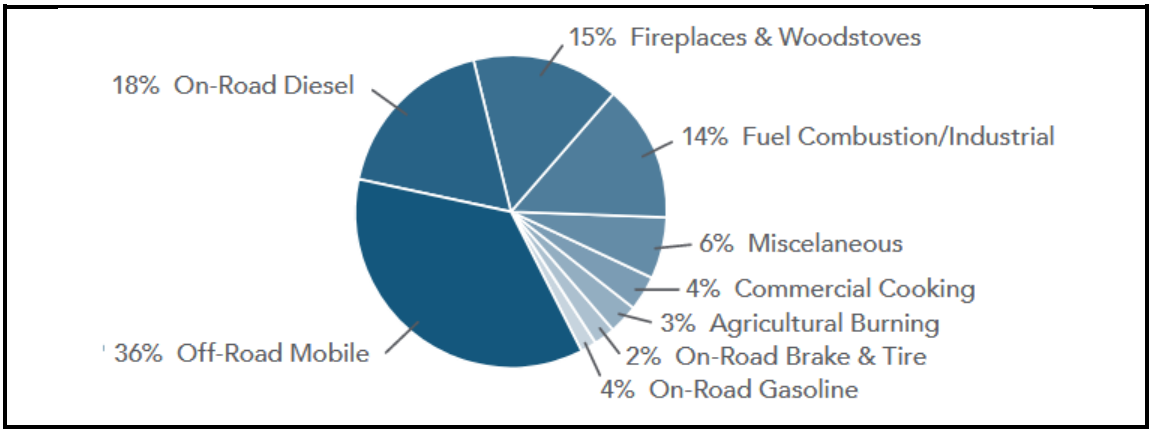
most recent inventory for year 2013 conditions is depicted in **Figure 3.7-2**, California Black Carbon Emissions Inventory (Year 2013). Off-road mobile sources account for a majority of black carbon emissions, totaling roughly 36 percent of the inventory. Other major anthropogenic sources of black carbon include on-road transportation, residential wood burning, fuel combustion, and industrial processes (Climate & Clean Air Coalition, n.d.).

Figure 3.7-1: California GHG Emissions Inventory by Scoping Plan Sector



Source: (California Air Resources Board, 2018a)

Figure 3.7-2: California Black Carbon Emissions Inventory (Year 2013)



Source: (California Air Resources Board, 2017a)

3.7.2.2 Effects of Global Climate Change

There are uncertainties as to exactly what the climate changes will be in various local areas of the earth. There are also uncertainties associated with the magnitude and timing of other consequences of a warmer planet: sea level rise, spread of certain diseases out of their usual geographic range, the effect on

agricultural production, water supply, sustainability of ecosystems, increased strength and frequency of storms, extreme heat events, increased air pollution episodes, and the consequence of these effects on the economy.

Within California, climate changes would likely alter the ecological characteristics of many ecosystems throughout the State. Such alterations would likely include increases in surface temperatures and changes in the form, timing, and intensity of precipitation. For instance, historical records are depicting an increasing trend toward earlier snowmelt in the Sierra Nevada. This snow pack is a principal supply of water for the State, providing roughly 50 percent of the State's annual runoff. If this trend continues, some areas of the State may experience an increased danger of floods during the winter months and possible exhaustion of the snowpack during spring and summer months. An earlier snowmelt would also impact the State's energy resources. Currently, approximately 13.53 percent of California's electricity comes from hydropower (California Energy Commission, 2019). An early exhaustion of the Sierra snowpack may force electricity producers to switch to more costly or non-renewable forms of electricity generation during spring and summer months. A changing climate may also impact agricultural crop yields, coastal structures, and biodiversity. Therefore, climate change will likely have detrimental effects on some of California's largest industries, including agriculture, wine, tourism, skiing, recreational and commercial fishing, and forestry (Planning and Conservation League, n.d.).

3.7.3 Environmental Impact Analysis

3.7.3.1 Methodology

Construction

Short-term emissions associated with construction activities largely depend on the type of development proposed, the amount of material to be imported and exported, equipment required, and construction schedules. Construction emissions of GHGs were calculated using the California Emissions Estimator Model (CalEEMod), version 2016.3.2 computer program. Modeling was conducted for the proposed Project based on estimated material to be imported and exported, off-road equipment usage, and construction schedules provided by the Project engineers. Other construction modeling assumptions, including mobile-source emission factors and usage rates, were based on default parameters contained in the model for Los Angeles County. In accordance with SCAQMD recommendations, construction-generated GHG emissions were amortized over an assumed 30-year Project life for Year 2021 and year 2030 conditions. Emissions modeling assumptions and output files are provided in the *Air Quality and Greenhouse Gas Impact Assessment* prepared for the proposed Project (Ambient Air Quality & Noise Consulting, 2019).

Operation

Long-term operational emissions of GHGs were also calculated using the CalEEMod, version 2016.3.2, computer program for Year 2021 and year 2030 conditions. Modeling was conducted based on the estimated building square footage to be constructed and vehicle trip-generation rates identified in the *Traffic Impact Analysis* prepared for the proposed Project (Kimley-Horn and Associates, Inc., 2019) . The quantification of Project-generated GHG emissions takes into account compliance with current building standards, such as the use of low-flow water fixtures and water-efficient irrigation systems. Proposed

Project and site enhancements that would contribute to reductions in mobile-source emissions were also accounted for in the analysis, based on methodologies contained in California Air Pollution Control Officers Association's (CAPCOA) Quantifying Greenhouse Gas Mitigation Measures and the default emission reductions identified in CalEEMod. These measures included reductions associated with providing increased diversity (LUT-3), transit accessibility within 0.5 mile of the Project Site (LUT-5), and improvements to the existing pedestrian network (SDT-1).

GHG emissions associated with the existing industrial uses that were removed were also quantified, based on the trip-generation rates identified in the traffic analysis prepared for this project and default energy usage, water usage, and waste-generation rates identified in CalEEMod. Project-generated GHG emissions were compared to estimated emissions associated with the removed industrial uses for determination of net changes in GHGs. The analysis does not account for potential emissions from onsite area or stationary sources that may have been associated with operation of the existing industrial uses. As a result, net changes in operational GHG emissions are conservatively estimated.

For comparison purposes, Project-generated emissions were also quantified for business-as-usual (BAU) conditions. The BAU scenario does not account for measures that would reduce Project-related energy or water use, per current building code requirements, or site enhancements that would contribute to reductions in mobile-source emissions. The BAU scenario includes GHG-reductions expected to be in force by 2020, including reductions associated with implementation of Pavley I vehicle standards, low-carbon fuel standards, and the State's Renewables Portfolio Standards.

3.7.3.2 Screening Analysis

Several impacts and corresponding thresholds of significance in the following section were eliminated from further analysis in this EIR. Topics were eliminated if the IS for the proposed Project concluded there would be "No Impact," or if impacts were identified to be "Less Than Significant… and will not be discussed further in the EIR." Therefore, only the topics described in the section below were determined to require further analysis in this EIR. A copy of the Initial Study, which contains the eliminated topics, is provided in **Appendix A**.

3.7.3.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and the *L.A. CEQA Thresholds Guide*, the proposed Project would have a significant impact on GHG emissions if it would:

VIII(a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

VIII(b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

The City of Los Angeles has not formally adopted quantitative significance thresholds for determination of whether or not a project would have a significant impact on the environment or conflict with an applicable GHG-reduction plan, policy, or regulation. However, various other entities have identified recommended GHG-significance thresholds, as discussed below:

State of California

By enacting SB 97, California's lawmakers expressly recognized the need to analyze GHG emissions as a part of the CEQA process. SB 97 required OPR to develop, and the Natural Resources Agency to adopt, amendments to the CEQA Guidelines addressing the analysis and mitigation of GHG emissions. The amendments to the CEQA Guidelines implementing SB 97 became effective on March 18, 2010. These amendments, however, do not establish a threshold of significance for the assessment of GHG impacts. Lead agencies are granted discretion to establish significance thresholds for their respective jurisdictions, including looking to thresholds developed by other public agencies, or suggested by other experts (i.e., CAPCOA and SCAQMD), so long as any threshold chosen is supported by substantial evidence. The California Natural Resources Agency has also clarified that the amendments recognized the cumulative effects of GHG emissions as they relate to climate change and that GHG impacts should be analyzed in the context of CEQA's requirements for the assessment of cumulative impacts.

California Air Pollution Control Officers Association (CAPCOA)

In its January 2008 "CEQA and Climate Change" white paper, CAPCOA identified a number of potential approaches for determining the significance of GHG emissions in CEQA documents. In its white paper, CAPCOA suggests making significance determinations "on a case-by-case basis in the context of the project at the time it comes forward" when no significance thresholds have been formally adopted by a lead agency. The CAPCOA white paper suggested a bright-line threshold of 900 $MTCO_2e$/year. As proposed, projects generating emissions exceeding this threshold would be considered to have a potentially significant impact. This threshold reflects the amount of emissions that ninety percent of development projects surveyed in four cities within California would generate, which included the cities of Los Angeles, Pleasanton, Dublin, and Livermore.

South Coast Air Quality Management District (SCAQMD)

At present time, the SCAQMD has not adopted a quantitative project-level GHG significance threshold for land use development projects (e.g., residential/commercial projects) subject to CEQA review. However, the SCAQMD did form a *GHG Significance Threshold Working Group* for the purpose of evaluating potential GHG significance thresholds. In October 2008, SCAQMD released a draft guidance document regarding interim CEQA GHG significance thresholds. Within this document, the SCAQMD proposed interim CEQA GHG indicators of significance using a tiered approach. Accordingly, under Tier 1, projects that would be considered exempt from CEQA would also be considered to have a less-than-significant GHG impact. Under Tier 2, projects that would be consistent with an adopted GHG-reduction plan would be considered to have a less-than-significant GHG impact. Under Tier 3, all non-industrial land use projects that would emit 3,000 $MTCO_2e$ per year, or less, would be considered to have a less-than-significant GHG impact. Under Tier 4, projects that achieve an identified GHG-percent reduction below BAU conditions would also be considered to have a less-than-significant GHG impact. This recommended Tier 4 standard was subsequently amended in November 2009 and September 2010 to include a recommended service population metric for commercial/residential projects that emit greater than 3,000 $MTCO_2e$ per year. Projects that would not exceed these thresholds would be considered to have a less-than-significant impact on the environment and would not conflict with GHG-reduction planning efforts.

For land use development projects, the SCAQMD has not adopted any of the above-discussed GHG significance thresholds recommended by the *GHG Significance Threshold Working Group*. The *GHG*

Significance Threshold Working Group has been inactive since 2011. However, in December 2008, the SCAQMD Governing Board adopted an interim GHG significance threshold of 10,000 $MTCO_2e$ for stationary source/industrial projects where the SCAQMD is the lead agency. This threshold, however, does not apply to the proposed Project given that the project would not include the installation of permitted stationary sources.

3.7.3.4 Construction Impacts

VIII(a): Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Short-term annual GHG emissions for the proposed Project are summarized in **Table 3.7-2**. Based on the modeling conducted, the highest annual GHG emissions associated with construction of the proposed Project would total approximately 1,022 $MTCO_2e$. In total, construction activities over the 30-month period would generate approximately 1,386 $MTCO_2e$. A small amount of GHG emissions from waste would also be generated during construction; however, this amount is speculative. Construction emissions, when amortized over the life of the proposed Project, defined as 30 years, would average approximately 46 $MTCO_2e$ per year. Amortized construction-generated GHG emissions were included in the operational GHG emissions inventory for evaluation of Project-generated GHG emissions in comparison to GHG significance thresholds (see Section 3.7.3.4).

Table 3.7-2: Short-Term Construction-Generated GHG Emissions

Year	Total GHG Emissions ($MTCO_2e$)
Construction Year 1	1,022
Construction Year 2	172
Construction Year 3	192
Total:	1,386
Amortized Emissions:	46

Based on CalEEMod computer modeling. Amortized emissions assume an average project life of 30 years. Refer to the Air Quality and Greenhouse Gas Impact Assessment prepared for the proposed Project for modeling results and assumptions. Source: (Ambient Air Quality & Noise Consulting, 2019)

Construction of the proposed Project includes various measures that would reduce short-term emissions from off-road equipment. Such measures include the use of off-road equipment meeting Tier 4 emission standards, idling limitations, and the use of newer, more efficient on-road haul trucks. Implementation of these measures would significantly reduce emissions of black carbon associated with short-term construction activities. For instance, with the use of Tier 4 off-road equipment, construction-generated emissions of black carbon diesel exhaust would be reduced by upwards of approximately 80 percent, compared to statewide fleet averages. With incorporation of measures to reduce short-term emissions from off-road equipment, impacts would be less than significant.

VIII(b): Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

Applicable plans for the reduction of GHGs include the *2017 Climate Change Scoping Plan*, *2016-2040 RTP/SCS*, the *Green LA* action plan, and the *Sustainable City pLAn*, which are discussed in Section 3.7.1 (California Air Resources Board, 2017b; Southern California Association of Governments, 2016; City of Los Angeles, 2007; Office of the Los Angeles Mayor, 2019). As discussed under **GHG-1** above, construction of the proposed Project includes various BMPs that would reduce short-term emissions from off-road equipment. Therefore, impacts would be less than significant.

3.7.3.5 Operational Impacts

VIII(a): Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

The proposed Project is an infill development within an existing urbanized area and located within 0.5 mile of existing transit services. The proposed Project would provide increased localized access to recreational uses and improved pedestrian and bicycle connectivity. The proposed Project would incorporate water-saving landscape irrigation features, energy-efficient lighting, and use of low-flow water fixtures per current California building code requirements.

Estimated long-term operational GHG emissions are summarized in **Table 3.7-3**. Based on the modeling conducted, operational GHG emissions would total approximately 497 MTCO2e/year during the initial year of operation (Year 2021) and 466 MTCO2e/year in year 2030. During the initial year of proposed Project operations, a majority of the GHG emissions emitted, roughly 73 percent, would be associated with motor vehicle use. Electricity and water use would constitute approximately 14 and 10 percent, respectively. The remaining approximately three percent of GHG emissions would be associated with natural gas use and waste generation (see **Figure 3.7-3**, Annual Operational GHG Emissions Source Contribution [Year 2021]). By year 2030, the electricity and water use would constitute roughly 11 and 8 percent of the proposed Project's GHG emissions inventory and motor vehicle use would constitute roughly 78 percent of total GHG emissions (see **Figure 3.7-4**, Annual Operational GHG Emissions Source Contribution [Year 2030]).

In comparison to BAU conditions (without GHG-reduction measures), the proposed Project would result in GHG reductions of approximately 8.6 percent. A majority of the GHG reductions would be associated with anticipated reductions in onsite electricity consumption and projected reductions in vehicle emission standards.

Development of the proposed Project would be required to comply with current 2016 building standards. For non-residential projects, these newer building standards are approximately 5 percent more efficient than the 2013 building standards and roughly 35 percent more efficient than the 2010 standards. In comparison to BAU conditions, mobile-source emissions would be reduced by approximately 8 percent.

In comparison to the emissions generated by the proposed Project, the industrial land uses that were removed would have generated substantially higher GHG emissions totaling approximately 2,411 $MTCO_2e$ in Year 2021 and approximately 1,945 $MTCO_2e$ in year 2030. Taking into account these removed GHG emissions and with the inclusion of amortized construction-generated GHG emissions, the proposed Project would result in overall net reductions of approximately -1,868 $MTCO_2e$ in Year 2021 and -1,432

$MTCO_2e$ in 2030. The proposed Project would not generate GHG emissions that would result in a net increase in GHG emissions; therefore, impacts would be less than significant.

Table 3.7-3: Summary of Annual Operational GHG Emissions

Land Use/Event (Capacity)	Emissions ($MTCO_2e$)[1]	
	Year 2021	Year 2030
Special Events (1,000)[2]	44	44
Special Events (2,000)[2]	96	96
Special Events (3,250)[2]	7	7
Special Events (5,000) [2]	6	6
Soccer Fields	156	151
Park Uses & Buildings	188	163
Total:	497	466
Business-As-Usual (BAU)[4]:	544	510
Reduction Compared to BAU:	-47 (-8.6%)	-44 (-9.4%)
Total with Amortized Construction Emissions[3]:	543	512
Less Industrial Uses Removed[5]:	-2,411	-1,945
Net Change Compared to Industrial Uses Removed:	-1,868 (-78%)	-1,432 (-74%)

1. Totals may not sum due to rounding. Emissions were quantified using the CalEEMod computer program based on trip-generation rates derived from the Traffic Impact Analysis (Kimley-Horn and Associates, Inc., 2019) prepared for the proposed Project. Refer to the Air Quality and Greenhouse Gas Impact Assessment prepared for the proposed Project (Ambient Air Quality & Noise Consulting, 2019) for emissions modeling assumptions and results. Project emissions include compliance with current building standards, including use of low-flow water fixtures, use of water-efficient irrigation systems, and improved neighborhood connectivity.

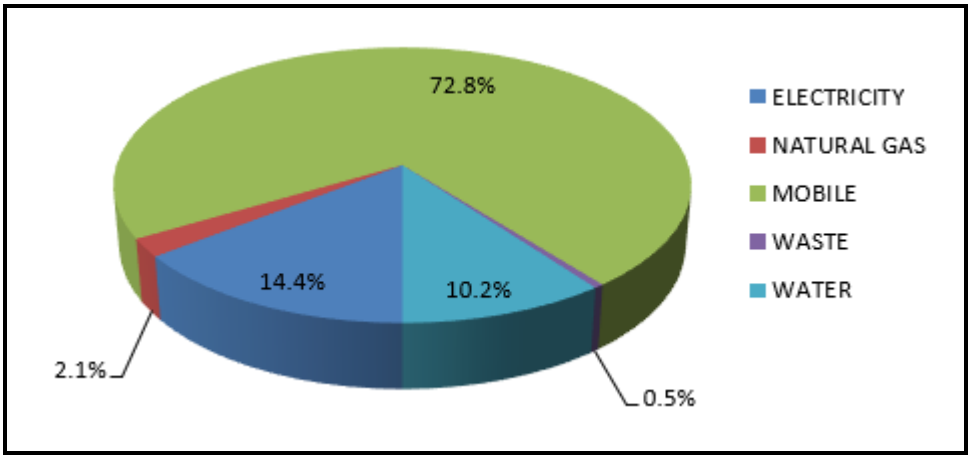
2. Assumes 24 days/year for events with a capacity of 1,000 attendees, 26 days/year for events with a capacity of 2,000 attendees, 2 days/year for events with a capacity of 3,250 attendees, and 1 day/year for events with a capacity of 5,000 attendees.

3. Construction-generated emissions were amortized over an estimated 30-year project life.

4. Business-as-usual excludes compliance with current building standards, including use of low-flow water fixtures, use of water-efficient irrigation systems, and improved neighborhood connectivity.

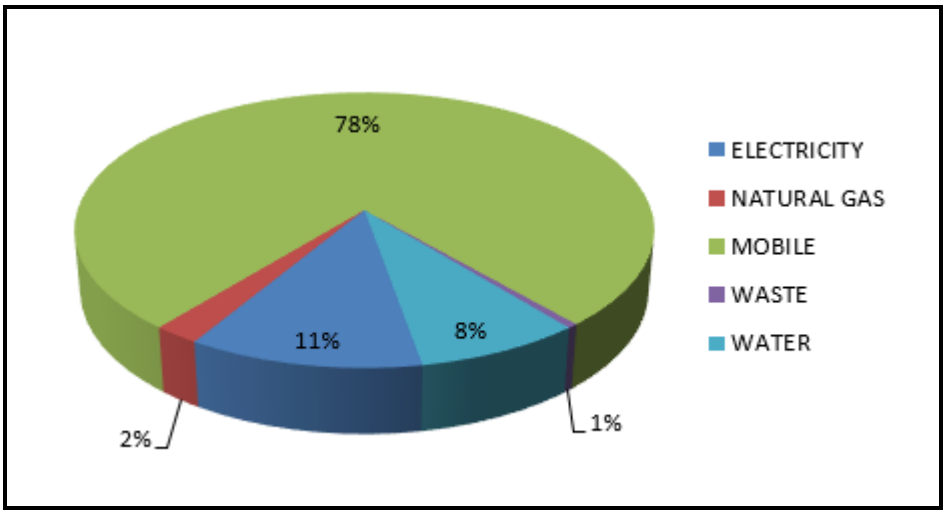
5. Existing industrial uses assumes 223,900 square feet of industrial uses. Vehicle trip-generation rates were derived from the Traffic Impact Analysis prepared for the proposed Project. Excludes stationary-source and off-road equipment emissions.

Figure 3.7-3: Annual Operational GHG Emissions Source Contribution (Year 2021)



Source: Ambient Air Quality & Noise Consulting, 2019

Figure 3.7-4: Annual Operational GHG Emissions Source Contribution (Year 2030)



Source: Ambient Air Quality & Noise Consulting, 2019

VIII(b): Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

Applicable plans for the reduction of GHGs include the *2017 Climate Change Scoping Plan*, *2016-2040 RTP/SCS*, the *Green LA* action plan, and the *Sustainable City pLAn*, which are discussed in Section 3.7.1 (California Air Resources Board, 2017b; Southern California Association of Governments, 2016; City of Los Angeles, 2007; Office of the Los Angeles Mayor, 2019). The proposed Project is an infill development project that would provide increased connectivity between existing land uses, including increased pedestrian and biking infrastructure that would improve active transportation options and transit access within the area. Improvements in active transportation options within the area and increased access to local recreational uses would help to reduce overall GHG emissions associated with motor vehicle use. It is estimated that these improvements would reduce mobile-source GHG emissions by a minimum of approximately 8 percent, when compared to conditions without active transportation options.

The proposed Project would also be designed to reduce emissions associated with energy use, water use, and waste generation per current building code requirements. Such measures would include the use of low-flow water fixtures, water-efficient irrigation systems, and high-efficiency lighting, which would reduce related GHG emissions by approximately 15 percent, compared to BAU conditions.

Furthermore, the proposed Project would result in an overall net reduction of long-term operational GHG emissions in comparison to the existing industrial uses that were removed. In comparison to the existing industrial uses that were removed, the proposed Project would result in an overall net GHG reduction of roughly 78 percent in Year 2021 and 74 percent in year 2030 (see **Table 3.7-3**). The proposed Project would also help to reduce urban heat island effect (i.e., built up areas that have higher temperatures compared to nearby rural areas).

Proposed Project features, including improvements to active transportation options; design features that reduce energy use, water use, and waste generation; and the conversion of industrial uses to open space uses, would contribute to reductions in GHG emissions. Therefore, the proposed Project would be consistent with and would not conflict with applicable GHG-reduction plans.

3.7.4 Best Management Practices

BMP-GHG-1: Off-Road Equipment Construction Requirements

Idling shall be limited for vehicles and off-road equipment. Off-road equipment shall meet Tier 4 emission standards and newer. Efficient on-road haul trucks shall be used, where practicable.

3.7.5 Mitigation Measures

Impacts related to GHG emissions would be less than significant; therefore, mitigation measures are not required.

3.7.6 Significant Unavoidable Adverse Impacts

There are no significant unavoidable adverse impacts on GHG emissions resulting from implementation of the proposed Project.

3.7.7 Cumulative Impacts

GHG emissions from a single project would be relatively small in comparison to State or global GHG emissions. A single project would not generate enough GHG emissions to result in climate change; rather, the accumulation of GHG in the atmosphere resulting from many projects may result in global climate change, which can cause significant environmental effects. Therefore, impacts related to GHG emissions are exclusively cumulative.

The analysis in Sections 3.7.3.4 and 3.7.3.5 take cumulative conditions and effects into account. As discussed in Sections 3.7.3.4 and 3.7.3.5, construction of the proposed Project would not generate GHG emissions that would significantly impact the environment and operation of the proposed Project is anticipated to reduce GHG emissions when compared to the existing industrial land use. In addition, the proposed Project would not conflict with GHG emissions reductions plans and policies. Therefore, the proposed Project would not result in cumulative impacts related to GHG emissions.

3.8 Hazards and Hazardous Materials

This section describes the affected environment and regulatory setting for Hazards and Hazardous Materials related to the Project Area and surrounding area. In addition, this section describes the potential impacts related to Hazards and Hazardous Materials that would result from the implementation of the proposed Project. As noted in the analysis below, impacts associated with Hazards and Hazardous Materials during construction or operation of the proposed Project would be less than significant with mitigation measures.

The information in this section is based on the Phase II Environmental Site Assessment (ESA) (Hushmand Associates, Inc., 2019) and the Human Health Risk Assessment (HHRA) (The Fehling Group, LLC, 2019) prepared for the proposed Project.

3.8.1 Regulatory Setting

A review of the various federal, state, regional, and local government regulatory requirements was conducted to identify regulations that relate to Hazards and Hazardous Materials. This section summarizes the various regulatory requirements that are relevant to the proposed Project.

3.8.1.1 Federal

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) establishes the framework for regulating hazardous and non-hazardous solid wastes (42 U.S.C. 6901 et seq.). Solids, liquids, and contained gaseous material that are discarded may be considered solid waste. RCRA provides "cradle-to-grave" controls and management requirements on generators and transporters of hazardous waste. Subtitle C of RCRA establishes standards for the transportation, treatment, storage, and disposal of hazardous waste. Congress has granted the United States Environmental Protection Agency (U.S. EPA) authority to develop the RCRA to implement policies that ensure safe management and cleanup of solid and hazardous waste (Environmental Protection Agency, 2018a). The U.S. EPA regulates hazardous waste under Subtitle C of the RCRA. The U.S. EPA has delegated responsibility to California Department of Toxic Substance Control to enforce and implement RCRA requirements. Under RCRA, the transportation of hazardous wastes and materials on public roads, highways, rails, and waterways is regulated by United States Department of Transportation (U.S. DOT) regulations.

The Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or "Superfund" of 1980 aims to identify and clean up abandoned hazardous-waste sites, as well as accidents, spills, and other contaminants that are released into the environment (42 U.S.C. 9601 et seq.). Through CERCLA, U.S. EPA has been granted authority to seek out parties responsible for any release and assure their cooperation to clean up the contaminants. Superfund site identification, monitoring, and response activities are coordinated through the state environmental protection or waste management agencies (Environmental Protection Agency, 2018b).

The Emergency Planning and Community-Right-to-Know Act

The Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 in response to concerns regarding environmental and safety hazards resulting from the storage and handling of toxic chemicals. EPCRA was created to help communities plan for chemical emergencies. EPCRA requires the reporting of storage, use, and releases of hazardous substances to the federal, state, and local governments.

Toxic Substances Control Act

The Toxic Substances Control Act (TSCA) of 1976 is administered by the U.S. EPA and applies to the manufacture, process, distribution, use, or disposal of TSCA-substances. TSCA regulates the testing, reporting, and record keeping for chemical substances and mixtures that pose an unreasonable risk to human health or the environment. It also identifies special chemical substances, which include polychlorinated biphenyls, asbestos, radon, lead, mercury, and formaldehyde.

Federal Insecticide, Fungicide, and Rodenticide Act

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) govern the registration, distribution, sale, and use of pesticides in the United States (7 U.S.C. 136 et seq.). Before a pesticide may be sold or distributed in the United States, it must be licensed with the U.S. EPA. Section 13 of FIFRA addresses U.S. EPA's authority to issue a "stop sale", use, or removal order whenever a pesticide or device is found to be in violation of FIFRA requirements. To enforce FIFRA requirements, U.S. EPA conducts producer establishment inspections, marketplace surveillance, and pesticide sampling analysis (Environmental Protection Agency, 2018c).

Occupational Safety and Health Act

The Occupational Safety and Health Act (OSHA) of 1970 is a United States labor law which governs occupational health and safety in the private sector and federal government. OSHA aims to ensure that employers provide employees with an environment that is free from hazards, such as exposure to toxic chemicals, excessive noise levels, mechanical dangers, heat or cold stress, or unsanitary conditions (US Department of Labor, n.d.)

Section 402 of the Clean Water Act: National Pollutant Discharge Elimination System Permits

Section 402 establishes the National Pollutant Discharge Elimination System (NPDES), a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards (RWQCB) administer this permitting program in California. Section 402(p) requires permits for discharges of stormwater from industrial/construction and municipal separate storm sewer systems (MS4s). In addition, construction sites on an acre or greater of land are required to obtain an NPDES permit.

U.S. Environmental Protection Agency Human Health Risk Assessment Guidance

The U.S. EPA developed guidance for conducting HHRAs, which include the following steps (U.S. Environmental Protection Agency, 2016):

- **Planning:** Guidance for identifying at-risk populations, environmental hazards of concern, sources of environmental hazards, pathways of exposure, health effects, and duration of toxic effects.

- **Hazard Identification:** Guidance for determining whether exposure to a stressor can cause an increase in the incidence of specific health effects.
- **Dose-Response:** Guidance for determining the likelihood and severity of adverse health effects in response to the amount and condition of exposure to an agent.
- **Exposure Assessment:** Guidance for measuring or estimating the magnitude, frequency, and duration of human exposure to an agent in the environment or estimating future exposures for an agent that has not yet been released.
- **Risk Characterization:** Guidance for determining the nature and presence or absence of risks, describing how the risk was assessed, and disclosing where uncertainties still exist.

3.8.1.2 State

California Environmental Protection Agency Unified Program

The California Environmental Protection Agency (CalEPA) oversees the implementation of the Unified Program to protect residents of the State from hazardous waste and materials. The Unified Program establishes consistency throughout the State in regard to administrative requirements, permits, inspections, and enforcement of the following environmental and emergency management programs:

- Aboveground Petroleum Storage Act Program
- Area Plans for Hazardous Materials Emergencies
- California Accidental Release Prevention Program
- Hazardous Materials Release Response Plans and Inventories
- Hazardous Material Management Plan and Hazardous Material Inventory Statements (California Fire Code)
- Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs
- Underground Storage Tank Program

Under the Unified Program, CalEPA oversees 81 certified local government agencies, known as Certified Unified Program Agencies (CUPAs), which apply regulatory standards established by CalEPA, the Department of Toxic Substances Control (DTSC), Governor's Office of Emergency Services, California Department of Forestry and Fire Protection - Office of the State Fire Marshal, and the State Water Resources Control Board.

California Environmental Protection Agency Human Health Risk Assessment Guidance

The CalEPA Preliminary Endangerment Assessment (PEA) Guidance Manual provides guidance on determining whether a release of hazardous substances to the environment presents a risk to human health or the environment (California Environmental Protection Agency, 2015). The PEA is the first step in identifying whether a release or threatened release of a hazardous waste, substance, or material has occurred; estimating the potential risk to public health and the environment; evaluating whether immediate response would be needed to reduce the risk; and determining whether further action or investigation would be needed.

CalEPA also released Human Health Risk Assessment Notes, which cover topics such as exposure factors, soil remedial goals for specific types of compounds, recommended screening levels for various constituents, and methodology for conducting screening-level HHRAs (California Department of Toxic Substances Control, 2018).

Department of Toxic Substances Control Environmental Health Standards for the Management of Hazardous Waste

The DTSC Environmental Health Standards for the Management of Hazardous Waste is included in California Code of Regulations (CCR), Title 22, Division 4.5. All hazardous waste generators must comply with the guidelines, which are enforced by DTSC, for identifying, labeling, accumulating, preparing, and preventing outcomes related to hazardous waste. Title 22, Article 3 highlights the procedures of identifying hazardous waste into these 4 categories: ignitable, corrosive, reactive, and toxic. Article 5 categorizes hazardous waste into acutely hazardous waste, extremely hazardous waste, non-RCRA hazardous waste, RCRA hazardous waste, special waste, and universal waste. Title 22 of the CCR also underscores the guidelines for managing hazardous waste, which includes storing, housekeeping, record keeping, and inspecting waste.

Cortese List

Government Code 65962.5 requires CalEPA to develop a hazardous waste and substances site list (Cortese List). The Cortese List complies with the CEQA requirements in providing information about the location of hazardous materials release sites. California Government Code 65962.5 requires CalEPA to annually update the Cortese List (California Department of Toxic Substances Control, 2010).

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act restricts the disposal of wastes or any other activity that may degrade waters of the state. The Act requires cleanup of wastes that are below hazardous concentrations but could impact ground and surface water quality (Section 13002). The Act established nine Region and State Water Boards, which are primarily responsible for protecting water quality in California. The Regional Water Boards regulate discharges by issuing permits through NPDES for waste discharge requirements for non-point source discharges. Anyone discharging materials or proposing to discharge materials that could affect water quality must file a report of waste discharge unless the discharge would be into a community sewer system (California State Water Resources Control Board, 2014).

3.8.1.3 Regional

South Coast Air Quality Management District

The South Coast Air Quality Management District (SCAQMD) enforces air quality rules and regulations through a variety of means, including inspections, educational and training programs, and fines. Specific SCAQMD rules applicable to the construction of the proposed Project may include, but are not limited to the following:

- *Rule 401 – Visible Emissions*: A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three

minutes in any one hour which is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines.

- *Rule 402 – Nuisance*: A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to 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. The provisions of this rule do not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.
- *Rule 403 – Fugitive Dust*: This rule is intended to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 applies to any activity or man-made condition capable of generating fugitive dust.
- *Rule 1113 – Architectural Coatings*: No person shall apply or solicit the application of any architectural coating within the SCAQMD, with a volatile organic compound (VOC) content in excess of the values specified in a table incorporated in the Rule.
- *Rule 1166 – Volatile Organic Compound Emissions from Decontamination of Soil*: The rule sets requirements to control the emission of VOCs during the excavating, grading, handling, and/or treating of VOC-contaminated soil. Prior to these activities, an approved mitigation plan must be obtained from SCAQMD.
- *Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities:* This rule 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:* This rule requires notification, monitoring, and record keeping for earth-moving activities of soil with applicable toxic air contaminant(s) of greater than 50 cubic yards at a site that has been designated and notified by the following: (A) U.S. EPA as a Superfund National Priorities List site; (B) DTSC as a Brownfield or Cleanup Program site; (C) the State Water Resources Control Board or RWQCB as a Site Cleanup Program site; (D) a county, local, or state regulatory agency as a Hazardous Material Release site, as defined in California Health and Safety Code Section 25260; or (E) the Executive Officer pursuant to subdivision (i).

3.8.1.4 Local

Los Angeles County Fire Department, Site Mitigation Unit

The Site Mitigation Unit (SMU) of the Health Hazardous Materials Division, Los Angeles County Fire Department (LACoFD) provides corrective action and voluntary oversight for remediation of contaminated sites and approval of closure plans within the jurisdiction of the Los Angeles County Unified Program Agency (LACoCUPA). This service is provided to ensure the protection of public health and the environment, and to facilitate completion of site cleanup by the property owner intending to obtain site closure with agency oversight in the LACoCUPA jurisdiction: RWQCB and the DTSC. DTSC amended CCR Title 22 Chapter 45, Section 67450.7 and adopted Title 22, Chapter 50, Section 68400.11–

.16 in August 2006, to delegate Corrective Action (CA) authority to the CUPAs. DTSC has determined that Los Angeles County CUPA is qualified at the Tier 2 level (highest Tier) to implement and enforce environmental assessment and corrective action conducted pursuant to Health and Safety Code, §25200.3(c)(3), 25187, 25187.1, 25200.10, and 2500.14 and in accordance with the requirement of CCR Title 22, §68400.11 et seq. (County of Los Angeles Fire Department, 2009).

Los Angeles Fire Department, Hazardous Materials Division

The Hazardous Materials Division of the Los Angeles Fire Department (LAFD) oversees the proper handling, storage, and disposal of hazardous substances. Regulations regarding the storage and disposal of hazardous wastes are contained within the California Health & Safety Code, Division 20, Chapter 6.5; CR, Division 4.5, Title 22; Unified Program Ordinance, LA County Code Chapter 12.50; and the City's Municipal Code, Article 7 of Chapter V, Divisions 8, and 14.

City of Los Angeles Methane Gas Ordinance

Division 71 of Chapter IX, Article 1, of the Los Angeles Municipal Code (LAMC) establishes that all new buildings and paved areas located in a Methane Zone or Methane Buffer Zone shall comply with the General Methane Mitigation Requirements and the Methane Mitigation Standards established by the Superintendent of Building. LAMC Table 71 (Minimum Methane Mitigation Requirements of the Methane Seepage Regulations) prescribes the minimum methane mitigation systems for a site, based on the appropriate Site Design Level. The Site Design Level is based on the measured concentration and pressure of methane gas determined during site testing. The Site Design Level ranges from Level I through V, with higher levels corresponding with increased mitigation system requirements. Adopted in 2004, Ordinance 175790 amended Division 71 to establish citywide methane mitigation requirements and include more current construction standards to control methane intrusion into buildings.

3.8.2 Environmental Setting

3.8.2.1 Hazardous Materials and Wastes

The Project Site is in an urban area with industrial and commercial land uses. The Project Site is currently being used for the construction of the Sixth Street Viaduct. The Project Site is surrounded by several commercial buildings to the west and east, open lots, and connecting and underlying roadways. Based on historic sources, the Project Site vicinity has remained the same since the 1980s. The Los Angeles River and the rail lines have been present since the 1890s (Earth Mechanics, Inc., 2014).

For the purposes of the Phase II ESA and HHRA, the Project Site was divided into various PARC Area Designations, which include PARC Area 1A, 1B, 2A, 2B, 2C, 3, 4A, 5, 6, 7, 8, 9, and 10 (see **Figure 3.8-1a** and **Figure 3.8-1b**, Soil Boring Locations; **Figure 3.8-2a** and **Figure 3.8-2b**, Methane and Methane Buffer Zones; and **Figure 3.8-3**a and **Figure 3.8-3b**, Areas of Concern with Contamination). The existing contamination at each PARC Area was determined based on previous site investigations for the Viaduct Replacement Project, and investigations performed for the proposed Project in the Phase II ESA and HHRA. The existing contamination for the Project Site is described in the sections below.

Figure 3.8-1a: Soil Boring Locations (West Park)

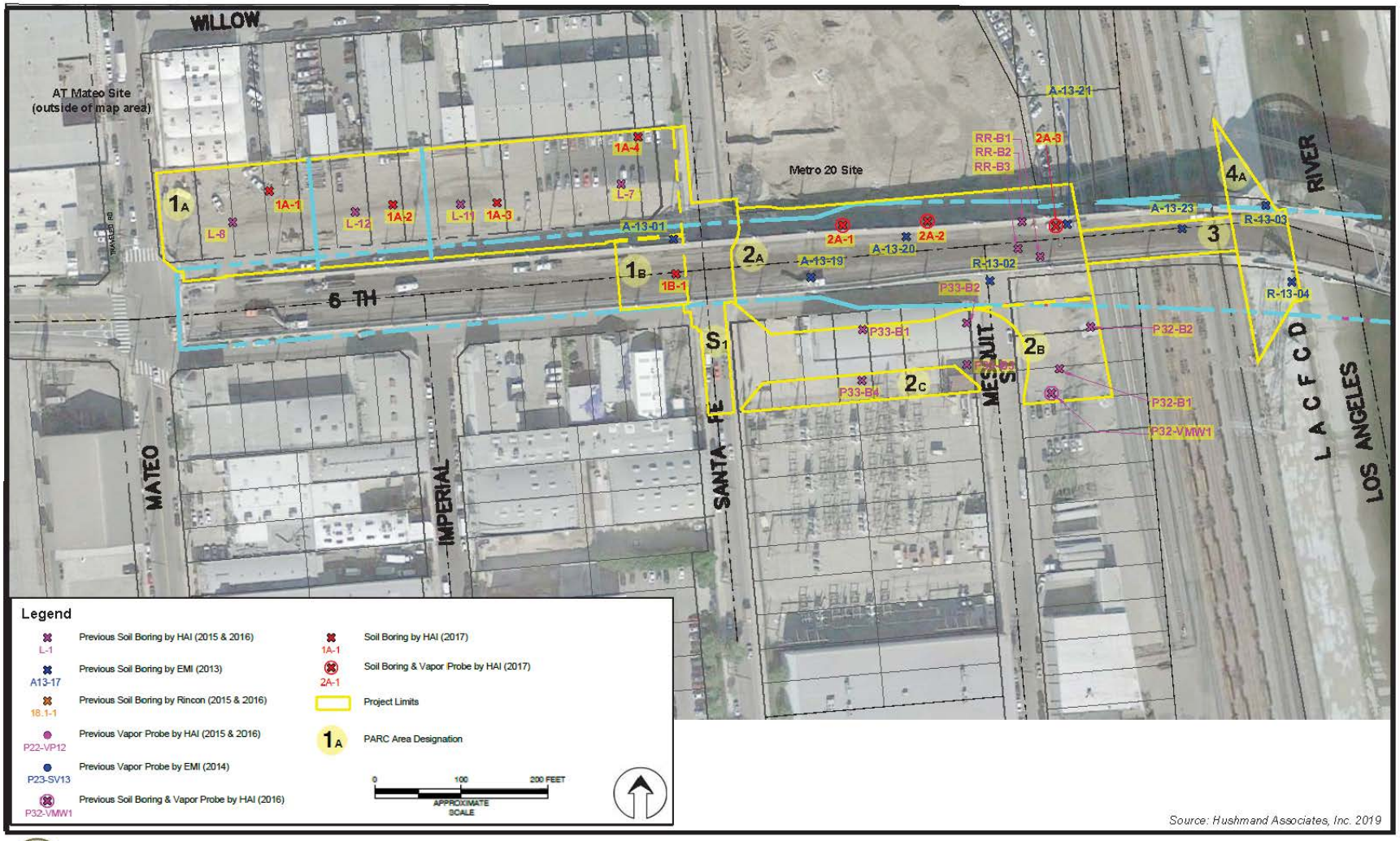


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FIGURE 3.8-1a. SOIL BORING LOCATIONS (WEST)
Sixth Street PARC Project

Figure 3.8-1b: Soil Boring Locations (East Park)

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FIGURE 3.8-1b. SOIL BORING LOCATIONS (EAST)
Sixth Street PARC Project

Figure 3.8-2a: Methane and Methane Buffer Zones (West Park)

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FIGURE 3.8-2a. METHANE & METHANE BUFFER ZONES (WEST)
Sixth Street PARC Project

Figure 3.8-2b: Methane and Methane Buffer Zones (East Park)

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FIGURE 3.8-3b. AREAS OF CONCERN WITH CONTAMINATION (EAST)
Sixth Street PARC Project

Figure 3.8-3a: Areas of Concern with Contamination

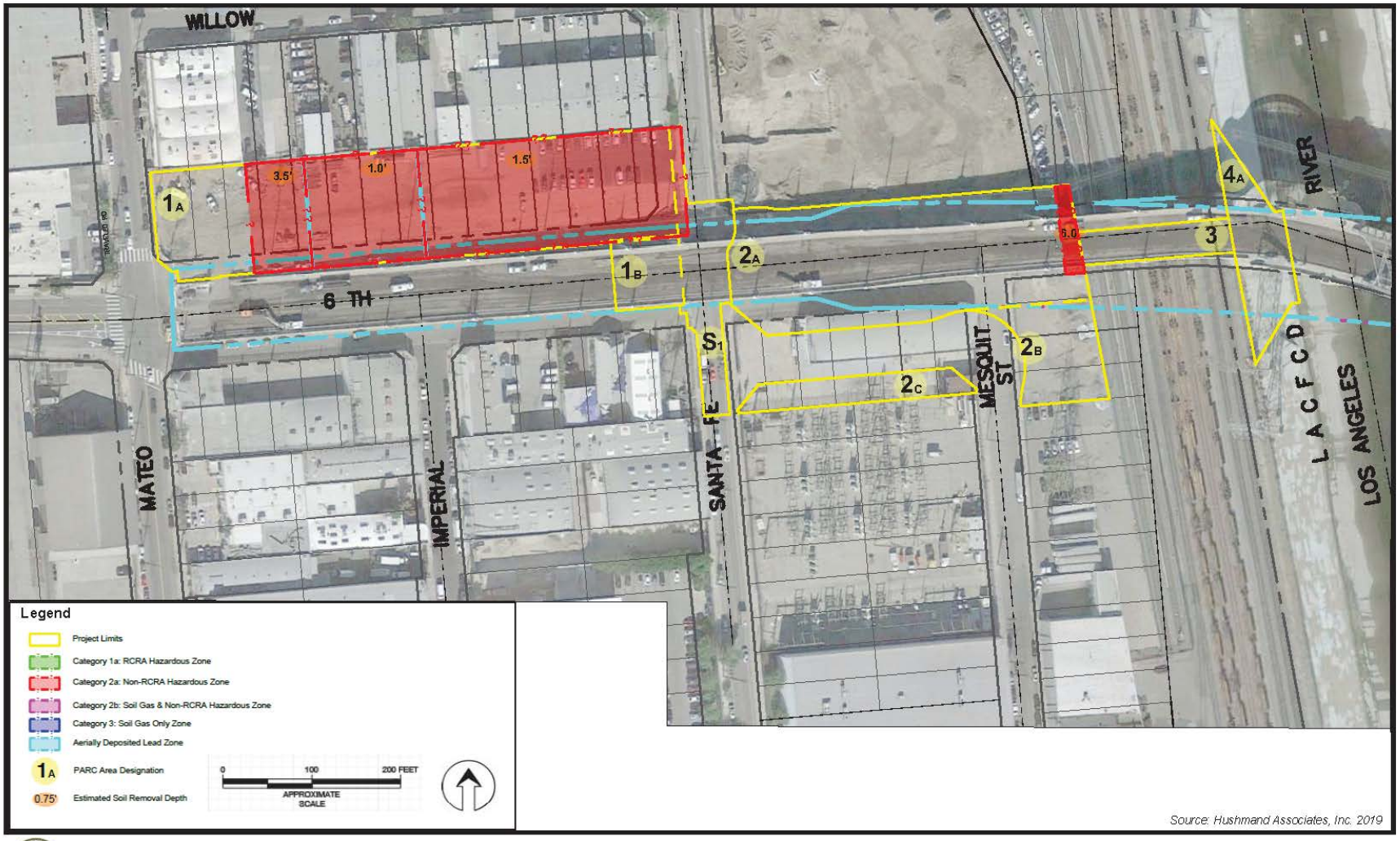

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FIGURE 3.8-3a. AREAS OF CONCERN WITH CONTAMINATION (WEST)
Sixth Street PARC Project

Figure 3.8-3b: Areas of Concern with Contamination

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FIGURE 3.8-3b. AREAS OF CONCERN WITH CONTAMINATION (EAST)
Sixth Street PARC Project

Previous Site Investigations

Previous site investigations were completed at the Project Site by Hushmand Associates, Inc. (2015 and 2016), Earth Mechanics, Inc. (2013 and 2014), and Rincon (2015 and 2016) for the proposed Project and Viaduct Replacement Project. The results of the review and screening indicate six zones with soil contamination classifying the soil as California (Non-RCRA) Hazardous Waste or RCRA Hazardous Waste, and two zones with soil gas contamination (see **Figure 3.8-1a** and **Figure 3.8-1b**). The soil contamination is primarily total petroleum hydrocarbons in the diesel range organics (TPH DRO) and lead. These findings were evaluated in the HHRA for potential risks to human health. In addition, two areas, PARC Area 1A and 7, are within the Methane Zone or had methane detected and are subject to methane mitigation requirements established by the Los Angeles Department of Building and Safety (LADBS) (see **Figure 3.8-2a** and **Figure 3.8-2b**).

Based on the previous site investigations, the Phase II ESA identified the following hazardous materials issues at the Project Area (i.e., area of direct and indirect impacts resulting from construction and operation of the proposed Project):

- Parcel 18.1 at 631 South Anderson Street and Parcel 18.2 at 625 South Anderson Street: The parcels are within PARC Area Designation 6 shown on **Figure 3.8-1b** and underlie the proposed East Park. The City previously filed a RCRA Subtitle C Site Identification Form to notify the CalEPA/DTSC of hazardous levels of heavy metals in the soil. The removal and disposal of the stockpile of soil for Parcel 18.1 was under CalEPA Hazardous Waste Identification (ID) Number CAR000266684.
- Metro 20 (prior Butterfield Property) site at 590 South Santa Fe Avenue: The site is just north of PARC Area Designation 2A shown on **Figure 3.8-1a** and is in proximity to the proposed Arts Plaza. This site is in the process of implementing remediation of groundwater and deep soil contamination plumes that extend under the City's Sixth Street right of way (ROW). The work is being performed under a Voluntary Cleanup Agreement between Metro and U.S. EPA/DTSC.
- Parcel 32: The site is within PARC Area Designation 2B shown on **Figure 3.8-1a**. The site includes a Remedial Action Order by the CalEPA/DTSC that was issued to Amtrak for past operations on the property. The investigation performed in August and September 2015 concluded that VOCs in soil gas exceed DTSC screening levels. This site underlies the proposed Arts Plaza.

In addition to the sites identified in the Phase II ESA, the DTSC identified the following hazardous materials issue at the Project Area:

- AT Mateo Site at 555 Mateo Street: The site is just north of PARC Area Designation 2A shown on Figure 3.8-1a and is in proximity to the proposed Arts Plaza. The site has undergone remediation under DTSC oversight and is currently certified for unrestricted land use.

Database Review

As described in the Initial Study for the proposed Project, the following data sources were reviewed for information on hazardous materials sites in the Project Area (California Environmental Protection Agency, 2012):

- **Cortese List**: There are 27 hazardous waste and substances sites in the City, but none are located within the Project Area.

- **EnviroStor Database**: The Project Area includes the site of a former paint manufacturing facility located southeast of the intersection of South Santa Fe Avenue and Willow Street on the west side of the River. The facility is listed as a voluntary cleanup site and has been active as of December 7, 2012 (Department of Toxic Substances Control, 2007). The site is underlain with contaminated soil and groundwater, and includes metals, petroleum, polynuclear aromatic hydrocarbons, and VOCs as potential contaminants.
- **GeoTracker Database**: There are no active Leaking Underground Storage Tank (LUST) sites in the Project Area. The former paint manufacturing facility site located southeast of the intersection of South Santa Fe Avenue and Willow Street is also listed on the GeoTracker Database as an active Waste Discharge Requirements (WDR) site as of May 27, 2016 (State Water Resources Control Board, 2015).

Phase II Site Investigation

A site investigation was completed as part of the Phase II ESA prepared for the proposed Project. The sampling area consisted of 13 acres of land. A total of 33 locations were drilled to obtain soil samples and install vapor probes for obtaining soil vapor samples at specific depths (see **Figure 3.8-1a** and **Figure 3.8-1b**). Soil samples from the shallow soil borings were analyzed for the compounds of concern, which may include heavy metals (i.e., arsenic, barium, cadmium, chromium, copper, lead, mercury, and zinc), diesel, and oil range petroleum hydrocarbons, and VOCs in soil gas.

The Phase II ESA concluded that the types and extent of contamination (e.g., heavy metals and hydrocarbons in near surface soils) is typical for areas with industrial and commercial land uses, with the exception of the areas adjacent to the Metro 20 site and two zones with soils classified as RCRA Hazardous Waste due to heavy metal contamination (Hushmand Associates, Inc., 2019). Soils contaminated with heavy metals and soil gases were found at a few sample sites in the Project Area (Hushmand Associates, Inc., 2019). The results of the soil sampling performed for the Phase II ESA are summarized in **Table 3.8-1** (see **Figure 3.8-3a** and **Figure 3.8-3b**).

As indicated in **Table 3.8-1**, the hazards and hazardous materials of concern in the Project Site are included below:

- **Title 22 Heavy Metals:** Title 22 of the CCR provides a list of heavy metals including antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, molybdenum, nickel, selenium, silver, thallium, vanadium, zinc, and hexavalent chromium, which are considered hazardous wastes if their concentration in milligrams per kilogram (mg/kg) exceeds the listed threshold limit concentration.
- **Polychlorinated Biphenyls:** Polychlorinated Biphenyls (PCBs) are a type of toxic chemical regulated by the TSCA. PCBs are most commonly found in electrical transformers and capacitors, air conditioning equipment, and lighting ballasts.
- **Volatile Organic Compounds:** VOCs are emitted gases that are typically released from burning fuel, oil and gas fields, diesel exhaust, or manufacturing processes. Many VOCs are considered hazardous air pollutants because they may have short-term and long-term adverse health effects.

- **Total Petroleum Hydrocarbons:** Total petroleum hydrocarbons (TPH) include chemical compounds that originate from crude oil and other petroleum products. Sources of TPH include gasoline pumps, spilled oil, and commercially used chemicals.
- **Lead and Aerially Deposited Lead:** Elevated lead concentrations exist in soils along older roadways as a result of aerially deposited lead (ADL) from the historical use of leaded gasoline. A Soil Management Agreement for Aerially Deposited Lead-Contaminated Soils (Agreement) was established between the California Department of Transportation (Caltrans) and DTSC. The Agreement applies to soils with elevated lead derived from leaded fuel tailpipe emissions found on the state highway system.
- **Methane:** Methane is a combustible natural gas that may be found in soil gas. LADBS developed the Methane Zone Map based on locations of historical crude oil and natural gas extraction wells.

Human Health Risk Assessment

The HHRA was conducted in accordance with U.S. EPA and CalEPA guidance described in Section 3.8.1. The HHRA evaluated long-term cancer risks, measured as the incremental lifetime cancer risk (ILCR), and toxicity, measured as the Hazard Index (HI), to construction workers and residential users (e.g. unrestricted land use) resulting from the proposed Project. Of the PARC Area Designations in **Table 3.8-1**, the HHRA included PARC Areas 1A, 2A, 2B, 2C, 5, 6, 7, and 8 because prior investigations indicated that these areas had chemicals of potential concern (COPCs) in soil or soil gas. PARC Area 3 was not analyzed because construction activities would not expose soils at the depth where an exceedance occurred. In addition, PARC Area 4 was not analyzed because construction activities are no longer proposed there. Based on the assumption that sensitive receptors would only come into contact with shallow soils, the HHRA incorporates the soil data collected in the upper ten feet of each PARC Area from the Phase II ESA.

The HHRA identified the following chemicals of potential concern (COPC) that contribute to the overall Project Site risk (The Fehling Group, LLC, 2019):

- **Arsenic:** Arsenic has an established regional background threshold value (BTV) for Southern California of 12 mg/kg, which is the level of arsenic that does not exceed background levels of arsenic typically found in soils. The maximum arsenic concentrations were below the arsenic BTV for PARC Areas 1A, 2A, 2B, 2C, 5, 7, and 8, but above the arsenic BTV for PARC Area 6 (26 mg/kg). Therefore, arsenic is a COPC in PARC Area 6.
- **Lead:** CalEPA has an established blood lead model to determine safe levels of lead in soil at residential and industrial sites. The screening level for residential soils is 80 mg/kg, meaning that lead concentrations above this level may pose an adverse health risk to residential receptors. Since the maximum value in each area exceeds 80 mg/kg, lead is considered a COPC for all PARC areas that the HHRA evaluated.
- **Other Metals:** In addition to arsenic and lead, soil samples were analyzed for 15 other metals. Based on the HHRA, antimony, barium, cadmium, copper, mercury, nickel, selenium, silver, and zinc were determined to be COPCs for at least one PARC Area. Eleven different COPCs were found at PARC Area 6, which had the most metal COPCs than any other PARC Area.

Table 3.8-1: Phase II ESA Findings

PARC Area Designation[1]	Location	Tested Contaminants	Findings
1A	Proposed West Park	Title 22 Heavy Metals (Cadmium and Lead)	Heavy metals concentrations exceeded DTSC screening level; Hexavalent chromium non-detect (ND) and below DTSC screening levels; Soluble Lead Concentrations (STLC) exceeded DTSC levels; and Leachable Lead Concentrations (TCLP) below RCRA levels. Soil classified as Non-RCRA or California Hazardous Waste.
		Total Petroleum Hydrocarbons (TPH)	Detected but not at levels approaching screening values
		Volatile Organic Compounds (VOC)	ND in all samples tested except for the area where an ongoing groundwater and deep soil cleanup action is ongoing
		Semi-Volatile Organic Compounds (SVOC)	ND
		Polychlorinated Biphenyls (PCB)	ND, except a type of PCB (Aroclor 1260) was detected at a concentration below the exposure limits of concern for humans
		Organochlorine Pesticides	ND or below the DTSC screening levels
1B	Proposed West Park	Title 22 Heavy Metals	Below DTSC screening levels
2A, 2B, 2C	Proposed Arts Plaza	Title 22 Metals, VOCs and SVOCs	ND or below DTSC screening levels, except for two samples
		TPH	Exceeded the DTSC screening level in one sample. Soils classify as Non-RCRA or California Hazardous Waste
		PCBs	ND
		Organochlorine Pesticides	ND

PARC Area Designation[1]	Location	Tested Contaminants	Findings
		Organophosphorus Pesticides	ND
		Chlorinated Herbicides	ND
		VOCs in Soil Gas	Widespread (Human Health Risk Assessment found VOCs do not exceed acceptable risk criteria)
3	Proposed River Gateway (River Access Tunnel)	Title 22 Metals	Below DTSC screening levels, except one sample with a cadmium concentration that exceeded the DTSC screening level at a depth of 50 feet below ground surface
		TPH	ND
		VOCs	ND
4A	Proposed River Gateway (West Bank of LA River Channel) [2]	Heavy Metals (Arsenic and Cadmium)	Exceeded DTSC screening levels. Soils classified as non-RCRA or California Hazardous Waste
		TPH and VOCs	ND, except very low concentration of gasoline detected
5	Proposed East Park	Total Lead	Exceeded DTSC screening level. Soils classified as non-RCRA or California Hazardous Waste
		Diesel Range TPH	Below DTSC screening level
6	Proposed East Park	Title 22 Metals	Some samples at non-RCRA and RCRA levels
		VOCs	Soils classified as RCRA Hazardous waste
7	Proposed East Park	Heavy Metals	Soils classified as non-RCRA or California Hazardous Waste
		Soil Gas	Soil gas contaminants exceed DTSC screening levels. Human Health Risk Assessment found that soil gas concentrations of PCE and TPH-DPO exceeded health risk criteria.
8	Proposed East Park	Lead	Exceeded DTSC screening levels

PARC Area Designation[1]	Location	Tested Contaminants	Findings
		TCLP	Soils classified as non-RCRA or California Hazardous Waste
		VOCs in Soil Gas	Exceeded DTSC screening levels
9	Proposed East Park (California Department of Transportation ROW)	Aerially Deposited Lead (ADL)	Dataset meets the criteria for a minimum of one foot of clean soil cover or pavement structure. Waste soils not classified as RCRA hazardous. Offsite disposal may be required.

1. *Refer to **Figures 3.8-3a** and **3.8-3b** for locations of PARC Area Designations*
2. Construction activities are no longer proposed in PARC Area 4A
Source: (Hushmand Associates, Inc., 2019)

- **Non-Metals:** Non-metal COPCs, including TPHs, VOCs, semi-volatile organic compounds, PCBs, and organochlorine pesticides (OCP), were found in all PARC Areas, particularly 6 and 7. Soil gas COPCs were most prevalent in PARC Area 2, but were also found in PARC Areas 6, 7, and 8.

In summary, the soil risk values and the maximum indoor and trench air risk values were identified. The HHRA found the following:

- The ILCR values slightly exceed the risk benchmark level for the residential receptor in PARC Areas 6, 7, and 8. The maximum ILCR value for PARC Area 7 is within the risk management range. The risk-driving COPCs are Aroclor 1260, a type of PCB, in soil (PARC Area 5) and tetrachloroethylene (PCE) in soil gas (PARC Areas 7 and 8).
- The HI values exceed the benchmark level for the residential receptor in all PARC Areas except PARC Area 8. The HI values exceed the benchmark level for the construction worker receptor in PARC Area 6 and 7 due to total petroleum hydrocarbons, diesel range organics (TPH-DRO).
- Lead exceeds the residential screening level in PARC Areas 1A, 5, 6, and 8 and exceeds the construction worker screening level in PARC Area 1A and 6.
- TPH-DRO and lead are the primary risk-driving COPCs.
- Residential indoor air risk values and construction worker trench air risk values associated with soil gas contamination did not exceed the ILCR or HI benchmark levels in PARC Area 2. Therefore, PARC Area 2 is not an area of concern for soil gas contamination, and the remediation proposed in the Phase II ESA is no longer recommended at this site.

The final step of the HHRA was the risk characterization, which estimated the potential risks to human health based on the assumed exposure to the COPCs described above. The HHRA employed a conservative approach by using the residential scenario (e.g., unrestricted land use) for park users and construction worker scenario.

3.8.2.2 Sensitive Receptors

Sensitive receptors are those members of the population that are most sensitive to exposure to hazardous materials, and they can be found in areas that include residences, hospitals, elder-care facilities, rehabilitation centers, elementary schools, daycare centers, and parks (see **Table 3.8-2**). The Project Area is primarily surrounded by industrial and commercial land uses immediately adjacent to the north, south, and west. However, residences, schools, and hospitals are located east and further north of the Project Area, and additional residences are located to the west and south of the Project Area.

The nearest residences in the vicinity of the proposed East Park are the Pico Gardens residences approximately 350 feet northeast of the Project Site, along South Clarence Street. The nearest residences in the vicinity of the proposed West Park is a residential development referred to as the "Brick Lofts," which is approximately 700 feet south of the Project Site, near the intersection of Mateo Street and Jesse Street. Additional residences in the vicinity of the proposed Project are included in **Table 3.8-2** and proposed residences are included in **Table 1-1** (see **Figure 1-2**).

Table 3.8-2: Sensitive Receptors

Property Name	Address	Approximate Distance from Project Area
Residences		
Pico Gardens	Housing community bordered by Fourth St. to the north, U.S. 101 to the east, South Clarence St. to the west, and Inez St. to the south	Less than 0.1 mile northeast of Project Area
Coronel Village	935 S Boyle Ave. Los Angeles, CA 90023	Less than 0.1 mile south of Project Area
Brick Lofts LLC	652 Mateo St. Los Angeles, CA 90021	Less than 0.1 mile south of Project Area
Toy Factory Lofts	1855 Industrial St. Los Angeles, CA 90021	Less than 0.1 mile south of Project Area
Joint Living and Working Quarters	East Fourth St. and Anderson St.	0.1 mile east of Project Area
AMP Lofts	695 South Santa Fe Ave. Los Angeles, CA 90021	0.2 mile south of Project Area
One Santa Fe	300 South Santa Fe Ave. Los Angeles, CA 90013	0.2 mile north of Project Area
Telacu Pico Aliso	1450 East First St. Los Angeles, CA 90033	0.3 mile northeast of Project Area
Pueblo del Sol	1400 Gabriel Garcia Marquez St. Los Angeles, CA 90033	0.6 mile north of Project Area
670 Mesquit	670 Mesquit St.	Less than 0.1 miles south of the Project Area
Hospitals		
Guadalajara Medical Clinic	2705 Whittier Blvd. Los Angeles, CA 90023	0.3 mile east of Project Area
Community Centers		
PUENTE Learning Center	501 South Boyle Ave. Los Angeles, CA 90023	0.5 mile east of Project Area
Boyle Heights Technology Youth Center	1600 East Fourth St. Los Angeles, CA 90033	0.5 mile east of Project Area

Property Name	Address	Approximate Distance from Project Area
Elder-Care Facilities		
La Modern Living Inc.	900 East Fourth St. Los Angeles, CA 90013	0.6 mile west of Project Area
Hollenbeck Terrace	610 South St Louis St. Los Angeles, CA 90023	0.5 mile east of Project Area
Rehabilitation Centers		
Fusion Physical Therapy	943 South Boyle Ave. Los Angeles, CA 90023	0.5 mile southeast of Project Area
Schools		
Felicitas and Gonzalo Mendez High School	1220 Plaza Del Sol East Los Angeles, CA 90033	0.6 mile north of Project Area
Dolores Mission School	170 South Gless St. Los Angeles, CA 90033	0.5 mile northeast of Project Area
SIATech Boyle Heights Charter School	501 South Boyle Ave. Los Angeles, CA 90033	0.5 mile east of Project Area
St. Mary Catholic School	416 South St Louis St. Los Angeles, CA 90033	0.7 mile east of Project Area
Boyle Heights High School	544 South Matthews St. Los Angeles, CA 90033	0.6 mile east of Project Area
Para Los Niños Charter Elementary School	1617 East Seventh St. Los Angeles, CA 90021	0.6 mile west of Project Area
Hollenbeck Middle School	2510 East Sixth St. Boyle Heights, CA 90023	0.5 mile east of Project Area
Metropolitan High School	727 Wilson St. Los Angeles, CA 90021	0.4 mile west of Project Area
School of Santa Isabel	2424 Whittier Blvd. Los Angeles, CA 90023	0.3 mile east of Project Area
Bishop Mora Salesian High School	960 South Soto St. Los Angeles, CA 90023	0.3 mile east of Project Area
Soto Street Elementary School	1020 South Soto St. Los Angeles, CA 90023	0.5 mile south east of Project Area

Property Name	Address	Approximate Distance from Project Area
Proposed Knowledge is Power Program in Los Angeles Elementary School	443 S Soto St. Los Angeles, CA 90033	0.6 mile northeast of Project Area
Daycare Centers		
DMWC Day Care	157 South Gless St. Los Angeles, CA 90033	0.5 mile north of Project Area
Garden of Progress Head Start	360 South Gless St. Los Angeles, CA 90033	0.4 mile northeast of Project Area
The Tina & Rick J. Caruso Early Education Center	845 East Sixth St. Los Angeles, CA 90021	0.5 mile west of Project Area
Park Place Head Start	2630 Seventh St. Los Angeles, CA 90023	0.6 mile southeast of Project Area
Parks		
Hollenbeck Park	415 South St Louis St. Los Angeles, CA 90033	0.6 mile north of Project Area
Religious Institutions		
St. Francis Xavier Church - Japanese Catholic Center	222 South Hewitt Street in Los Angeles	0.6 mile northwest of Project Area
Weller Street Baptist Church	129 South Gless Street in Los Angeles	0.4 mile northeast of Project Area
Dolores Mission Church	320 South Gless Street in Los Angeles	0.4 mile northeast of Project Area
Pico Gardens Foursquare Church	320 South Gless Street in Los Angeles	0.4 mile northeast of Project Area
St. Mary's Catholic Church	407 South Chicago Street in Los Angeles	0.5 mile northeast of Project Area
Santa Isabel Church	918 South Soto Street in Los Angeles	0.2 mile southeast of Project Area

Source: (GPA Consulting, 2019)

3.8.3 Environmental Impact Analysis

3.8.3.1 Methodology

Potential significant impacts associated with the proposed Project were determined based on the Phase II ESA, which presented the findings of the subsurface investigation, recommendations for handling potential hazardous materials, and recommendations for additional testing (Hushmand Associates, Inc., 2019). Potential significant impacts were also determined based on the HHRA, which quantified potential health risks for construction workers and future on-site sensitive receptors due to chemicals in soil and soil gas (i.e., vapor) and evaluated whether the potential health risks warrant mitigation (The Fehling Group, LLC, 2019).

Phase II ESA Methodology

As described in Section 3.8.2, the locations of borings and soil vapor probes from prior investigations and this investigation are shown on **Figure 3.8-1a** and **Figure 3.8-1b**. In the Phase II ESA, the data from the prior site environmental investigations and from this investigation on soil and soil gas contaminants were screened against the CalEPA DTSC Screening Levels for the Residential Scenario, RCRA and non-RCRA hazardous material classifications, and Caltrans criteria for the re-use of soils containing lead (for the samples from borings designated as ADL borings). The Phase II ESA presents screening results for soil, soil gas and ambient air, methane, and ADL; findings and recommendations for shallow soil, ADL, and soil gas conditions; recommendations for handling groundwater during construction; and remediation alternatives.

HHRA Methodology

A HHRA involves examining issues regarding site-related contaminants, or COPCs. These issues include characterizing environmental fate and transport, determining if sampling is sufficient to characterize COPCs, and assessing the exposure of COPCs to human receptors. These evaluations comply with CalEPA and U.S. EPA risk assessment guidance (California Environmental Protection Agency, 2015; U.S. Environmental Protection Agency, 1991; U.S. Environmental Protection Agency, 1989).

For the proposed Project, the receptors evaluated in the HHRA include a construction worker and a residential child and adult. These receptors are assessed using the reasonable maximum exposure (RME) approach, which is defined by the U.S. EPA as the "highest exposure that is reasonably expected to occur," by applicable exposure routes (i.e., through inhalation, ingestion, or skin contact) (California Department of Toxic Substances Control, 2014). The assumption of potential exposure represents a conservative approach, which is recommended by U.S. EPA and CalEPA risk assessment guidance to make the HHRA sufficiently protective of the potential receptors (The Fehling Group, LLC, 2019).

The HHRA process consists of four primary components as the basis for identifying potential health risks posed to current and/or future receptors at a Site (The Fehling Group, LLC, 2019). These HHRA components are described in the following sections.

Data Evaluation/Chemicals of Potential Concern

This section evaluated data collected from previous investigations conducted by Earth Mechanics, Inc. (2014) and Hushmand Associates, Inc. (2017) for usability in HHRA. The methods used for selecting COPCs were also presented.

Toxicity Assessment

Relevant toxicity endpoints and criteria are identified for each COPC, which are used to evaluate potential chronic (i.e., greater than seven years) carcinogenic and noncarcinogenic health impacts from oral, dermal, and inhalation exposure routes.

Exposure Assessment

Exposure assessment is the process of measuring or estimating the intensity, frequency, and duration of human exposure. Potential human receptors and the routes through which potential exposure to COPCs may occur are identified. The magnitude and duration of exposure was estimated for each receptor.

Exposure assessment can be quantified using risk-based concentration (RBC) and exposure point concentration (EPC), which are used to calculate risk. RBC is the chemical-specific concentration that corresponds to a target risk level. The HHRA calculated the RBC for the residential receptor and the construction worker receptor. EPC represents a conservative estimate of the chemical concentration from a particular medium or route of exposure. The HHRA included EPCs for indoor air and construction trench air.

Risk Characterization

The HHRA was conducted in accordance with CalEPA and U.S. EPA guidance described in Section 3.8.1.1 and 3.8.1.2. As recommended by the LACoFD, potential health risks associated with a residential (i.e., unrestricted land use) scenario and a construction scenario were quantified. The results of the toxicity assessment and exposure assessment are used to estimate the ILCR and the noncancer HI for each receptor. The thresholds for carcinogenic and noncarcinogenic health risks are as follows:

- Carcinogenic Health Risk: Based on the CalEPA Vapor Intrusion Mitigation Advisory, incremental lifetime cancer risk ILCR is categorized as follows:
    - If the vapor intrusion risk is less than 1E-06, no further action is required.
    - If the vapor intrusion risk is greater than 1E-06, but less than 1E-04, the need for action (e.g., additional data collection or risk characterization, monitoring, vapor intrusion mitigation, or source remediation) must be evaluated.
    - If the risk is greater than 1E-04, then action, such as vapor intrusion mitigation or source remediation, is required (California Environmental Protection Agency, 2011).
- Noncarcinogenic Health Risk: The noncancer HI approximates the effect of substances on a target organ. An HI below 1.0 denotes that would likely not result in adverse non-cancer health effects over a lifetime of exposure and would ordinarily be considered acceptable. An HI equal to or greater than 1.0 does not necessarily suggest a likelihood of adverse effects; however adverse health effects are possible (U.S. Environmental Protection Agency, 2018).

3.8.3.2 Screening Analysis

Several impacts and corresponding thresholds of significance in the following section were eliminated from further analysis in this EIR. Topics were eliminated if the IS for the proposed Project concluded there would be "No Impact," or if impacts were identified to be "Less Than Significant… and will not be discussed further in the EIR." Therefore, only the topics described in the section below were determined to require further analysis in this EIR. A copy of the Initial Study, which contains the eliminated topics, is provided in **Appendix A**.

3.8.3.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and the *L.A. CEQA Thresholds Guide*, the proposed Project would have a significant impact on Hazards and Hazardous Materials if it would:

IX(a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

*F.2 Human Health Hazards***:** The determination of significance shall be made on a case-by-case basis, considering the following factors:

- The regulatory framework for the health hazard;
- The probable frequency and severity of consequences to people from exposure to the health hazard; and
- The degree to which project design would reduce the frequency of exposure or severity of consequences of exposure to the health hazard.

IX(d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment. (See *LA CEQA Thresholds Guide* Section F.2)

3.8.3.4 Construction Impacts

IX(a): Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Proposed Project construction would require the removal of contaminated soils and the use of construction materials that could be hazardous, such as paints, sealants, and cement. The transport, use, and disposal of these materials would be conducted in compliance with applicable federal, state, and local laws pertaining to the safe handling, transport, and disposal of hazardous materials. These laws include RCRA, which includes requirements for hazardous solid waste management; SCAQMD Rules; the DTSC Environmental Health Standards for the Management of Hazardous Waste (California Code of Regulations, Title 22, Division 4.5), which include standards for generators and transporters of hazardous waste; and the provisions of the LAFD, Hazardous Materials Unit, which include requirements for the use and storage of hazardous materials. In addition, the transportation of hazardous wastes and materials would be conducted in compliance with U.S. DOT hazardous materials regulations. A Stormwater Pollution Prevention Plan (SWPPP) would also be developed in accordance with NPDES

permitting requirements and would include construction best management practices (BMP) to prevent spills or leaks of toxic or hazardous materials.

The project area would be remediated to the standards and the requirements of the regulating agencies prior to beginning construction. Based on the Phase II ESA, remediation recommendations were proposed for the handling and disposing of hazardous materials identified in different PARC Area Designations (see **Figure 3.8-3a** and **Figure 3.8-3b**, Areas of Concern with Contamination). **Table 3.8-3** summarizes the remediation recommendations and corresponding mitigation measures for the sample areas. With incorporation of mitigation measures **MM-HAZ-1** through **MM-HAZ-6** (see Section 3.8.5 for additional information), the Project Site would be remediated to standards acceptable by LACoFD and other regulatory agencies as required prior to construction. Under these standards, the concentrations of contaminants of concern would not pose health risks to construction workers or the public.

Potential health risks associated with a construction scenario were quantified and evaluated based on the carcinogenic health risk (ILCR) and noncarcinogenic health risk (HI) thresholds described in Section 3.8.3.1. A summary of the findings from the HHRA is included in **Table 3.8-4**.

Table 3.8-3: Remediation Recommendations

Recommendation Category	PARC Area Designation[1]	Estimated Depth of Contamination (feet bgs)	Summary of Recommendation	Mitigation Measure[2]
Category 1A (RCRA Level Heavy Metals, PCB or TPH DRO Only)	6 (around boring 6-3)	4.0	Remediation by Excavation and Disposal of the Soil at Class 1 Hazardous Waste Landfill (approximately 5,859 cubic yards)	**MM-HAZ-1**
	6 (around boring Parcel 18.1)	4.5		
	6 (around Parcel 18.2)	3.5		
Category 2A (Heavy Metals and/or TPH DRO at Non-RCRA Levels Only)	1A West Portion	3.5	Excavate and Dispose of Soil at Class 2 Landfill as Non-RCRA Hazardous Waste (approximately 7,279 cubic yards)	**MM-HAZ-2**
	1A Central Portion	1.0		
	1A East Portion	1.5		
	2A NE Corner	6.0		
	5 Central Portion	4.0		
	6 (around boring 6-2)	0.75		
	6 (around borings 6-4 and 6-5)	2.0		

Recommendation Category	PARC Area Designation[1]	Estimated Depth of Contamination (feet bgs)	Summary of Recommendation	Mitigation Measure[2]
Category 2B (Heavy Metals and/or TPH DRO at Non-RCRA Levels and VOCs in Soil Gas)	7 North Central	2.0	Excavate and Dispose of Soil at Class 2 Landfill as Non-RCRA Hazardous Waste (approximately 3,267 cubic yards), and Install SVE System and Optional Perimeter Vertical Barrier/Liner, as required by regulating agency	**MM-HAZ-2**
	7 Central Portion	2.0		
	8 West Portion	4.0		
Category 3 (VOCs in Soil Gas but No Heavy Metals or TPH DRO in Soil)	7 North Portion	15.0	Three options are proposed: Option 1 – Excavate and Dispose of Soil as RCRA Hazardous Waste at Class 1 Landfill and Install Liner and/or SVE System; Option 2 – Installation and Operation of SVE System and Optional Perimeter Vertical Barrier/Liner; or Option 3 – Design and Installation of Subsurface Gas Mitigation Systems for Proposed Development Facilities	**MM-HAZ-3**
	7 East Portion	15.0		
	8 East Portion	15.0		
Category 4 (Soil with ADL Only)	9	1.0	Provide Clean Soil Cover or Pavement Cover per the Caltrans/DTSC ADL Agreement (up to approximately 14,949 square feet)[3]	**MM-HAZ-4**
Methane Zone	1A (Paved area near existing building), 7	N/A	Implement Methane Mitigation and Complete Methane Testing	**MM-HAZ-6**

*1. Refer to **Figure 3.8-3a and Figure 3.8-3b** for locations of PARC Area Designations*
2. See Section 3.8.5 for a description of mitigation measures.
3. The results indicate that the soils above a depth of approximately 2.9 feet bgs would require one foot of clean soil cover to remain on site per the Caltrans/DTSC ADL Agreement
bgs = below ground surface
Source: (Hushmand Associates, Inc., 2019)

As shown in **Table 3.8-4**, the ILCR in all PARC Areas was below the CalEPA and U.S. EPA *de minimis* risk target of 1E-06 or within the commonly-applied risk management range (1E-06 to 1E-04). Based on these findings, the HHRA concluded that carcinogenic health impacts would be less than significant and neither mitigation nor remedial actions would be required. The noncancer HI exceeded the regulatory benchmark of 1.0 in PARC Areas 6 (1.0) and 7 (4.0) primarily due to TPH-DRO (see **Table 3.8-4**). In addition, lead exceeded the screening level in PARC Areas 1A and 6 (see **Table 3.8-4**). Based on these findings, the HHRA preliminarily recommended mitigation and/or corrective action at these locations.

Table 3.8-4: Summary of HHRA Findings for Construction Worker Receptor

PARC Area[1]	ILCR (unitless)[2]			HI (unitless)[3]			Lead Soil EPC (mg/kg)[4]	Comments	Recommendations
	Soil	Soil Gas (Indoor Air)	Total	Soil	Soil Gas (Indoor Air)	Total			
1A	3E-09	-	3E-09	3E-01	-	3E-01	**389**	Lead exceeds screening level	Implement **MM-HAZ-2**
2A, 2B, and 2C	0E+00	2E-08	2E-08	7E-02	2E-01	3E-01	28	-	Soil gas remediation not needed; Implement **MM-HAZ-2** for PARC Area 2A
5	0E+00	-	0E+00	3E-01	-	3E-01	81	-	Implement **MM-HAZ-2**
6	8E-08	-	8E-08	**1E+00**	-	**1E+00**	**1839**	Soil HI driven by TPH-DRO; lead exceeds screening level	Implement **MM-HAZ-1**, **MM-HAZ-2**, and **MM-HAZ-5**
7	2E-10	1E-07	1E-07	**2E+00**	**2E+00**	**4E+00**	58	Soil HI driven by TPH-DRO; soil gas trench air HI driven by TPH-DRO	Implement **MM-HAZ-2** and **MM-HAZ-3**
8	0E+00	2E-08	2E-08	1E-01	1E-02	2E-01	130	-	Implement **MM-HAZ-2** and **MM-HAZ-3**

1. *Refer to **Figure 3.8-3a** and **Figure 3.8-3b** for locations of PARC Area Designations*
*2. Values in **bold** indicate ILCR values that exceed CalEPA and U.S. EPA de minimis risk target of 1E-6 and the commonly applied risk management range of 1E-04 to 1E-06.*
*3. Values in **bold** indicate HI values that exceed the regulatory benchmark of 1.0.*
*4. Values in **bold** indicate lead soil EPC values that exceed the construction worker screening level of 160 mg/kg.*
5. PARC Areas 1A, 2A, 2B, 2C, 5, 6, 7, and 8 are addressed because a review of the environmental data collected over the last several years indicated that these parcels likely pose the greatest potential health risks for the proposed Project.
ILCR = incremental lifetime cancer risk; HI = noncancer hazard index (HI); EPC = exposure point concentration; TPH-DRO = total petroleum hydrocarbons, diesel range organics
Source: (The Fehling Group, LLC, 2019)

However, the TPH-DRO and lead exceedances are commonly driven by a limited number of samples within limited areas. The HHRA indicated that additional site characterization may increase the sample size such that CalEPA and U.S. EPA thresholds are no longer exceeded in some PARC Areas. Proposed remedial actions are conservatively estimated, additional site characterization may reduce the need for remediation in some of the PARC Areas.

With implementation of the remediation recommendations from the Phase II ESA and HHRA (**MM-HAZ-1** through **MM-HAZ-6**), the Project Site would be remediated to standards acceptable by LACoFD and other regulatory agencies as required prior to construction. With remediation, health risks to construction workers during construction activities (i.e., excavating, trenching, and transporting soil) would be reduced below CalEPA and U.S. EPA thresholds. During construction activities, the City will coordinate with regulatory agencies (i.e., Metro, U.S. EPA, and DTSC) overseeing ongoing cleanup actions in the Project Area (**BMP-HAZ-1**) and the contractor will comply with all SCAQMD rules and regulations (**BMP-HAZ-2**). Therefore, adverse health effects to construction workers, the public, and the environment are not expected to occur. With implementation of **MM-HAZ-1** through **MM-HAZ-6**, impacts would be less than significant with mitigation.

IX(d): Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.

As described in Section 3.8.2.1, there are no Hazardous Waste and Substances Sites in the Project Area that are included on the Cortese List (Government Code Section 65962.5). However, the site investigation from the Phase II ESA found contaminated soil and groundwater plumes in the Project Site (i.e., heavy metals, lead, TPH, VOCs, and soil gas). Although the Metro 20 site is not within the boundaries of the proposed Project Site, soils within the Project Site (south of the Metro 20 site) were found to be contaminated with VOCs. A groundwater and deep soil cleanup action is ongoing at this location under a Voluntary Cleanup Agreement between Metro, U.S. EPA, and DTSC. The City would coordinate with these agencies during construction activities to minimize risks to the public or the environment.

Although the At Mateo site is outside the boundaries of the proposed Project Site, the AT Mateo site is another area of concern. This site has undergone remediation under DTSC oversight, and is currently certified for unrestricted land use. However, there is potential for previously unidentified contamination to be discovered. The City would coordinate with DTSC during construction activities to minimize risks to the public or the environment.

Although the site investigation identified areas within the Project Site with soils that could potentially classify as RCRA hazardous waste, implementation of mitigation measures **MM-HAZ-1** through **MM-HAZ-6** (see Section 3.8.5 for additional information) would remediate the Project Site to standards acceptable by LACoFD and other regulatory agencies as required prior to construction (Hushmand Associates, Inc., 2019). Under these standards, the concentrations of contaminants of concern would not pose health risks to construction workers or the public (see **HAZ-3** below for further discussion on human health risks). Therefore, with implementation of **MM-HAZ-1** through **MM-HAZ-6** impacts would be less than significant.

As shown on **Figure 3.8-2a** and **Figure 3.8-2b**, portions of the proposed Project would be located within the City's Methane and Methane Buffer Zone. As such, the construction of facilities (e.g., buildings,

underground vaults with access, and certain paved areas) in these zones must meet the requirements of City Ordinance 175790 and Division 71, Methane Seepage Regulations. Based on sampling and evaluation conducted as part of the Phase II ESA, methane mitigation would be required in PARC Area 1A, which is in the Methane Zone, and PARC Area 7, where soil gases were detected and impervious surfaces would be constructed adjacent to existing buildings.

Any buildings constructed in PARC Area 1A would include methane mitigation systems meeting Division 71 requirements, unless additional testing indicates no subsurface gas pressure and lower methane concentrations. In addition, paved surfaces that are over 5,000 square feet in area and within 15 feet of the exterior wall of a commercial, industrial, institutional building would be vented in accordance with the Methane Mitigation Standards, design Level II, unless additional testing indicates no subsurface gas pressure and lower methane concentrations (see **MM-HAZ-6** in Section 3.8.5 for additional information). With implementation of **MM-HAZ-6**, methane in soil gas would not create a significant hazard to the public or the environment and impacts would be less than significant with mitigation.

3.8.3.5 Operational Impacts

IX(a): Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

The proposed Project may require the use of hazardous materials during operation, such as paint for the sports field(s), pesticides and fertilizers for the landscaping, and other materials used for maintenance of the facilities. Hazardous materials would be properly handled, contained, transported, and disposed of in compliance with applicable laws and regulations, which may include the RCRA, the DTSC Environmental Health Standards for the Management of Hazardous Waste, the provisions of the LAFD Hazardous Materials Unit, OSHA and the California Division of Occupational Safety and Health (Cal/OSHA) safety standards, and U.S. DOT hazardous materials regulations.

Potential health risks associated with a residential scenario (i.e., unrestricted land use) for a park user were quantified and evaluated based on the carcinogenic health risk (ILCR) and noncarcinogenic health risk (HI) thresholds described in Section 3.8.3.1. A summary of the findings from the HHRA is included in **Table 3.8-5**.

As shown in **Table 3.8-5**, ILCR values slightly exceed the CalEPA and U.S. EPA *de minimis* risk target of 1E-06 for the residential receptor (i.e., park user) in PARC Area 6 (1.1E-06), PARC Area 7 (5E-06), and PARC Area 8 (2E-06). For PARC Area 7, the exceedances are within the risk management range of 1E-04 to 1E-06. Due to the lack of soil gas data for the area, soil gas sampling would be conducted in PARC Area 6 (see **MM-HAZ-5**). If soil gas samples in PARC Area 6 yield ILCR values below the *de minimis* risk target or within the risk management range, carcinogenic health impacts would be less than significant and mitigation and/or remedial actions would not be required. If ILCR values are above the risk management range, then additional remedial actions would be required.

As shown in **Table 3.8-5**, the HI exceeds the regulatory benchmark of 1.0 in all areas except PARC Area 8, primarily due to TPH-DRO. In addition, lead exceeded its screening level in PARC Areas 1A, 5, 6, and 8. As described in Section 3.8.3.4, the TPH-DRO and lead exceedances are commonly driven by a limited number of samples within limited areas. The health risks were conservatively estimated,

Table 3.8-5: Summary of HHRA Findings for Residential Receptor

PARC Area[1]	ILCR (unitless)[2]			HI (unitless)[3]			Lead Soil EPC (mg/kg)[4]	Comments	Recommendations
	Soil	Soil Gas (Indoor Air)	Total	Soil	Soil Gas (Indoor Air)	Total			
1A	8E-08	-	8E-08	**2E+00**	-	**2E+00**	**389**	Soil HI driven by TPH-DRO; lead exceeds screening level	Implement **MM-HAZ-2**
2A, 2B, and 2C	0E+00	9E-07	9E-07	**1E+00**	3E-01	**2E+00**	28	Soil HI driven by TPH-DRO and mercury; target organ assessment indicates no adverse noncancer health effect	Soil gas remediation not needed; Implement **MM-HAZ-2** for PARC Area 2A
5	0E+00	-	0E+00	**3E+00**	-	**3E+00**	**81**	Soil HI driven by TPH-DRO; lead slightly exceeds screening level	Implement **MM-HAZ-2**
6	**1E-06**	-	**1E-06**	**1E+01**	-	**1E+01**	**1839**	Soil ILCR driven by Aroclor 1260; soil HI driven by TPH-DRO; lead exceeds screening level	Implement **MM-HAZ-1**, **MM-HAZ-2**, and **MM-HAZ-5**
7	2E-8	**5E-06**	**5E-06**	**2E+01**	**3E+00**	**2E+01**	58	Soil gas indoor air ILCR driven by PCE; soil HI driven by TPH-DRO; soil gas indoor air HI driven by TPH-DRO	Implement **MM-HAZ-2** and **MM-HAZ-3**
8	0E+00	**2E-06**	**2E-06**	9E-02	4E-02	1E-01	**130**	Soil gas indoor air driven by PCE; lead exceeds screening level	Implement **MM-HAZ-2** and **MM-HAZ-3**

1. *Refer to **Figure 3.8-3a** and **Figure 3.8-3b** for locations of PARC Area Designations*
*2. Values in **bold** indicate ILCR values that exceed CalEPA and U.S. EPA de minimis risk target of 1E-06 and the commonly applied risk management range of 1E-04 to 1E-06.*
*3. Values in **bold** indicate HI values that exceed the regulatory benchmark of 1.0.*
*4. Values in **bold** indicate lead soil EPC values that exceed the residential screening level of 80 mg/kg.*
5. HHRA addresses PARC Areas 1A, 2A, 2B, 2C, 5, 6, 7, and 8 as review of environmental data collected over the last several years indicated that these parcels likely pose the greatest potential health risks
ILCR = incremental lifetime cancer risk; HI = noncancer hazard index; EPC = exposure point concentration; TPH-DRO = total petroleum hydrocarbons, diesel range organics; PCE = tetrachloroethylene
Source: (The Fehling Group, LLC, 2019)

additional site characterization may further reduce health risks below CalEPA and U.S. EPA thresholds such that the need for remediation in some of the PARC Areas may be reduced.

With implementation of the remediation recommendations from the Phase II ESA and HHRA (**MM-HAZ-1** through **MM-HAZ-6**), the Project Site would be remediated to standards acceptable by LACoFD and other regulatory agencies as required prior to construction. Following remediation, health risks to residential receptors (i.e., park users) associated with COPCs would be reduced below CalEPA and U.S. EPA thresholds. Therefore, adverse health effects to residential receptors (i.e., park users) are not expected to occur. With implementation of **MM-HAZ-1** through **MM-HAZ-6**, impacts would be less than significant.

IX(d): Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.

See response to **IX(d)** under Section 3.8.3.4 above. The Project Site is underlain with contaminated soil and groundwater plumes and portions of the Project Site are located in the City's Methane Zone and Methane Buffer Zone. With implementation of mitigation measures **MM-HAZ-1** through **MM-HAZ-6** (see Section 3.8.5 for additional information), the proposed Project would not create a significant hazard to the public or the environment. Therefore, impacts would be less than significant.

3.8.4 Best Management Practices

BMP-HAZ-1: Coordination with Regulatory Agencies

The City shall coordinate with Metro, U.S. EPA, and DTSC during construction activities to minimize health risks to the public or the environment associated with ongoing cleanup actions within the Project Area.

BMP-HAZ-2: Compliance with SCAQMD Rules and Regulations

The contractor shall implement measures to ensure that all construction activities are consistent with SCAQMD rules and regulations, including Rule 1166 – Volatile Organic Compound Emissions from Decontamination of Soil and Rule 1466 – Control of Particulate Emissions from Soils with Toxic Air Contaminants.

3.8.5 Mitigation Measures

MM-HAZ-1: Remediation Category 1A

The City shall be required to implement the following measures in areas where RCRA Level Heavy Metals, PCBs, or TPH DRO will be excavated and disposed of at Class 1 Hazardous Waste Landfills:

- Soils will be excavated as needed up to a maximum depth of 4.5 feet below ground surface (bgs), consistent with the limits designated on **Figure 3.8-3a** and **Figure 3.8-3b**, Areas of Concern with Contamination.
- The transport and disposal of RCRA hazardous waste will be accompanied with a Hazardous Waste Manifest (i.e., documentation accompanying the transport, treatment, storage and disposal of hazardous waste) completed by a licensed transporter. A site-specific CalEPA Hazardous Waste

Generator Identification Number will be obtained for each RCRA hazardous waste. Additional sampling and testing will likely be required by the facility accepting the soil for disposal.

- For excavations deeper than 4 feet, shoring or other approved means will be required to maintain stability of the excavation walls.
- During excavation activities, dust and runoff controls will be implemented to prevent windborne or surface waterborne migration of the soil from the Project Site. The soils will be directly loaded into the transport trucks, which will require tarps to prevent spillage or windblown loss of soil during transport. These controls will be verified and monitored by an independent third party.
- A site-specific Health and Safety Plan (HASP) will be prepared and implemented during all proposed construction activities, including full time perimeter sampling and testing of particulates and dust from the Project Site.
- All onsite workers and supervisors will complete a 40-hour OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) training course and be equipped with the appropriate personal protective equipment.
- Excavated areas will be backfilled with certified clean soil.

MM-HAZ-2: Remediation Category 2A

The City shall be required to implement the following measures in areas where soils contaminated with Heavy Metals and/or TPH DRO that are classified as non-RCRA hazardous waste will be excavated. These contaminated soils shall be disposed at Class 2 Landfills:

- Soils will be excavated as needed up to a maximum depth of 6 feet bgs, consistent with the limits designated on **Figure 3.8-3a** and **Figure 3.8-3b,** Areas of Concern with Contamination.
- The transport and disposal of non-RCRA hazardous waste will be accompanied with a Hazardous Waste Manifest completed by a licensed transporter. A CalEPA Non-RCRA Hazardous Waste Generator Identification Number will be obtained. Additional sampling and testing will likely be required by the facility accepting the soil for disposal.
- For excavations deeper than four feet, shoring or other approved means shall be required to maintain stability of the excavation walls.
- During excavation activities, dust and runoff controls will be implemented to prevent windborne or surface waterborne migration of the soil from the Project Site. The soils will be directly loaded into the transport trucks, which will require tarps to prevent spillage or windblown loss of soil during transport. These controls will be verified and monitored by an independent third party.
- A site-specific HASP will be prepared and implemented during all proposed construction activities, including full time perimeter sampling and testing of particulates and dust from the Project Site.
- All onsite workers and supervisors will complete a 40-hour OSHA HAZWOPER training course and be equipped with the appropriate personal protective equipment.
- Excavated areas will be backfilled with certified clean soil.

Remediation Category 2B

In addition to the measures above, the following measures shall be implemented in areas where VOCs were observed in soil gases:

- Emission controls will be used to clear the area of emitting VOCs (i.e., spraying water or applying foam agents to all exposed soil surfaces and/or using large, spark-free fans). Full-time monitoring will be required to verify that the emission controls are effective in preventing the VOCs from impacting workers or the public. Monitoring will comply with SCAQMD Rule 1166.
- A detailed HASP will be prepared and implemented during the excavation and transport of contaminated soils.
- The excavation, transport, and disposal of contaminated soils will require permitting and approval by the CUPA, CalEPA/DTSC, and SCAQMD. A detailed Work Plan/Remedial Action Plan will be prepared and submitted to these agencies for review and approval. Under Rule 1166, a Mitigation Management Plan for potential VOC emissions during excavation will be submitted to SCAQMD and subject to SCAQMD approval. A site-specific CalEPA Hazardous Waste Generator Identification Number will be obtained and manifests completed by the licensed transporter.
- A soil vapor extraction (SVE) system will be designed and installed to remove and treat VOCs in the soil gases. If Health Risk Assessments indicate the need, a vertical barrier/line will be installed around the perimeter of the area to prevent soil gases with VOCs from migrating back into the area. Gases migrating from below the clean backfill or deeper depths will be extracted through the SVE slotted wells and treated by the SVE treatment system. Treatment for VOCs typically involves carbon filtration unless hydrogen sulfide is detected in the gas stream. Operating and maintenance procedures for the SVE system and permit applications will be prepared and approved by the oversight agency and SCAQMD.
- If the City determines it is necessary, a "Pilot Study" will be designed and implemented to evaluate the sustainable flow rate and concentration of VOCs in the soil gas stream and to determine the size of the final SVE system components.
- Design of the SVE system, preparation of a Design Report and Work Plan/Remedial Action Plan (including HASP) will be submitted to and subject to approval by the CUPA and LACoFD Site Mitigation Unit.
- The SVE will be implemented and monitored. This may require several months to over a year.
- The City shall provide documentation to the CUPA, LACoFD Site Mitigation Unit, and SCAQMD when the SVE has reached the specified cleanup goals.
- Excavated areas will be backfilled with certified clean soil.

MM-HAZ-3: Remediation Category 3: The City shall be required to implement one of the following three options in areas where no heavy metals were observed, but VOCs were observed in soil gas:

- Option 1: This alternative will involve the same measures as described under Category 2b above. Contaminated soils will be removed to a depth of up to 15 feet or more and shoring of the excavation walls will be necessary. A liner will be installed on the bottom of the excavation area to

prevent contaminated soil gas from re-entering the backfill soils. Gas migration from the side walls will be mitigated by either installation of a vertical liner placed on the side walls of the excavation or SVE wells installed vertically outside the limits of the excavation after backfilling is done. The backfill soil will be certified clean fill and placement will need to meet the geotechnical specifications of the proposed Project design. During the process, the site will require strict emissions controls and monitoring.

- Option 2: This alternative, the SVE treatment method, utilizes extraction and monitoring wells (In Situ Method) or excavation and encapsulation of impacted soils in above ground piles with horizontal slotted piping (On Site Method), a vacuum pump or pumps, and carbon filtration units to extract and remove VOCs from the soil gas. The process will require several steps as follows:
  1. Design and implementation of a "Pilot Study" to evaluate the sustainable flow rate and concentration of VOCs in the soil gas stream and to size the final SVE system components.
  2. Design of the SVE system, preparation of a Design Report and Work Plan/Remedial Action Plan (including HASP) for submittal to and approval by the CUPA and CalEPA/DTSC.
  3. Solicitation of bids for construction and implementation of the remediation.
  4. Implementation and monitoring of the SVE. This may require several months to over a year.
  5. Reporting to the agencies with documentation that the SVE has reached the specified clean up goals.
- Option 3: This alternative will mitigate the impact of the VOCs and/or methane and hydrogen sulfide by precluding soil gases migration from the subsurface soil and intrusion into structures or other facilities and surface emissions. Depending on the type of soil gases and pressure in the soil gas, the systems can include several of the following components:
  - Shallow excavation (three to four feet bgs) to allow installation of the mitigation components (some of the soil will be used to backfill trenches)
  - Gravel layers and slotted piping for gas collection
  - Liner installation above the slotted piping and extending side wide
  - Vacuum pumps for gas extraction or air injection blowers
  - Filtration systems to remove VOCs and/or hydrogen sulfide from the gas stream
  - Geomembrane barriers placed beneath concrete slabs and/or foundations or fill areas
  - Installation of automated and/or manual monitoring systems

MM-HAZ-4: Remediation Category 4

The City shall be required to implement the following measures in areas within Caltrans ROW where soil contains ADL:

- In accordance with the Caltrans/DTSC ADL Agreement, soils above a depth of approximately 2.9 feet bgs will require one foot of clean soil cover to remain on site per the Caltrans/DTSC ADL Agreement.

MM-HAZ-5: Soil Gas Sampling

Additional soil gas sampling and testing is recommended for completion in PARC Areas 1A, 5, 6, 7, and 8. The additional sampling could potentially eliminate or reduce the need for soil gas remediation.

Ambient air and soil gas samples shall be tested for VOCs. If soil gas samples in PARC Area 6 yield ILCR values below the *de minimis* risk target or within the risk management range, no further mitigation and/or remedial actions will be required. If ILCR values are above the *de minimis* risk target, additional remedial actions will be taken to lower values to within the risk management range, such as applying SVE to a maximum depth of 15 to 20 feet bgs.

MM-HAZ-6: Methane Mitigation and Testing

Methane mitigation applies to PARC Area 1A, which is located within the Methane Zone, and portions of PARC Area 7, where soil gases were detected and impervious surfaces are to be constructed adjacent to existing buildings. Any buildings (except naturally vented) to be constructed in Area 1A shall have methane mitigation systems meeting Level II requirements involving membrane and passive venter per Table 71, unless additional testing indicates no subsurface gas pressure and lower methane concentrations. In addition, paved areas that are over 5,000 square feet in area and within 15 feet of the exterior wall of a commercial, industrial, institutional building, shall be vented in accordance with the Methane Mitigation Standards, design Level II, unless additional testing indicates no subsurface gas pressure and lower methane concentrations.

Additional testing for methane concentrations and subsurface pressure shall be completed in accordance with the Division 71 Methane Seepage Regulations testing requirements should any buildings or paved areas over 5,000 square feet be proposed in PARC Area 1A and in PARC Area 7 where methane was detected.

3.8.6 Significant Unavoidable Adverse Impacts

With implementation of **MM-HAZ-1** through **MM-HAZ-6** described above, the proposed Project would not result in significant unavoidable adverse impacts.

3.8.7 Cumulative Impacts

Project level impacts related to Hazards and Hazardous Materials are not likely to result in or have significant cumulative impacts to Hazards and Hazardous Materials in relation to other projects in the vicinity of the proposed Project. As described in this section, there is a Remedial Action Order at Parcel 32 and there is ongoing cleanup activity at Metro 20, In addition, the City has filed RCRA Subtitle C Site Identification Form to notify the CalEPA/DTSC of hazardous levels of heavy metals in the soil at Parcels 18.1 and 18.2. With implementation of the mitigation measures described in Section 3.8.5, the proposed Project is not expected to result in any significant impacts on Hazards and Hazardous Materials. Other projects in the vicinity of the proposed Project (see **Table 1-1**) would be required to comply with all federal and state regulations and be consistent with local policies related to Hazards and Hazardous Materials, including RCRA, the DTSC Environmental Health Standards for the Management of Hazardous Waste, SCAQMD Rules, the provisions of the LAFD Hazardous Materials Unit, OSHA and Cal/OSHA safety standards, and U.S. DOT hazardous materials regulations. In addition, other projects would be required

to develop avoidance, minimization, and mitigation measures. Therefore, the proposed Project would not result in cumulatively considerable impacts related to Hazards and Hazardous Materials.

3.9 Hydrology and Water Quality

This section describes the affected environment and regulatory setting for Hydrology and Water Quality related to the Project Area. In addition, this section describes the potential impacts related to Hydrology and Water Quality that would result from implementing the proposed Project. As noted in the analysis below, impacts associated with Hydrology and Water Quality during construction and operation of the proposed Project would be less than significant and no mitigation measures are required.

The analysis in this section is based on the *Preliminary Hydrology and Hydraulics Report* (Tetra Tech, 2018a), the *Conceptual Low Impact Development Report* (Tetra Tech, 2018b), and the *Geotechnical Site Investigation* report (Hushmand Associates, Inc., 2018) prepared for the proposed Project.

3.9.1 Regulatory Setting

A review of the various federal, state, regional, and local government regulatory requirements was conducted to identify regulations that relate to Hydrology and Water Quality. This section summarizes the various regulatory requirements that are relevant to the proposed Project.

3.9.1.1 Federal

Clean Water Act

The Federal Water Pollution Control Act, commonly referred to as the Clean Water Act (CWA) of 1972, regulates the discharge of pollutants into waters of the United States. As defined in 40 CFR 230.3(s), waters of the United States include:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
    a. Which are or could be used by interstate or foreign travelers for recreational or other purposes;
    b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
    c. Which are used or could be used for industrial purposes by industries in interstate commerce;
4. All impoundments of waters otherwise defined as waters of the United States under this definition;
5. Tributaries of waters identified in paragraphs (s)(1) through (4) of this section;

6. The territorial sea; and
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (s)(1) through (6) of this section; waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States.

Under the CWA, the U.S. Environmental Protection Agency (U.S. EPA) implements pollution control and water quality standards for surface waters.

Section 303: Impaired Water Bodies (303[d] list) and Total Maximum Daily Loads

Section 303(d) requires states to identify impaired water bodies that do not meet state water quality standards. Within California, the State Water Resources Control Board (SWRCB) and Regional Water Quality Control Boards (RWQCB) assess water quality monitoring data for surface waters every two years to determine whether water bodies contain levels of pollutants that exceed the water quality standards (i.e., impaired water bodies). A state's list of impaired or threatened water bodies is referred to as a 303(d) list. States are required to develop total maximum daily loads (TMDL) for 303(d) listed impaired water bodies, which are the greatest amount of a pollutant that a water body can receive while still meeting water quality standards. States must then implement programs to remediate and control pollutants to meet the TMDLs. TMDLs specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed. TMDLs are used to develop National Pollutant Discharge Elimination System (NPDES) permit limits for stormwater discharges (NPDES permits are discussed further below), which may trigger additional monitoring and reporting.

Section 401: Water Quality Certification

Under Section 401 of the CWA, any project requiring a federal license or permit that may result in a discharge to a water of the United States must obtain a State Water Quality Certification, which certifies that the project will be in compliance with state water quality standards. The most common federal permits triggering 401 Certification are CWA Section 404 permits issued by the United States Army Corps of Engineers (USACE) (see below for a description). The 401 permit certifications are obtained from the appropriate RWQCB, dependent on the project location, and are required before the USACE issues a 404 permit.

In some cases, the RWQCB may have specific concerns with discharges associated with a project. As a result, the RWQCB may issue a set of requirements, known as waste discharge requirements (WDR), under the State Water Code (Porter-Cologne Act) that define activities, such as the inclusion of specific features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. WDRs can be issued to address both permanent and temporary discharges of a project.

Section 402: National Pollutant Discharge Elimination System Permits

Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the United States. RWQCBs administer this permitting program in California. Section 402(p) requires permits for discharges of stormwater from industrial/construction and municipal separate storm sewer systems (MS4s).

Section 404: Permits for Dredged or Fill Material

Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the United States (U.S. Environmental Protection Agency, 2019). This permit program is administered by the USACE. Activities that are regulated under this program include fill for development, water resource projects, infrastructure development, and mining projects. Under the permit program, no discharge of dredge or fill material is permitted if (1) a practicable alternative that is less damaging to the aquatic environment exists or (2) the nation's waters would be significantly degraded. The permit requires that steps to avoid or minimize impacts to wetlands, streams, and other aquatic resources are shown, and compensation is provided for unavoidable impacts.

Section 10 of Rivers and Harbors Act of 1899

Section 10 of the Rivers and Harbors Act of 1899 requires that activities conducted below the ordinary high water elevation of navigable waters of the United States be approved and permitted by the USACE. Regulated activities may include the placement or removal of structures; the dredging or disposal of dredged material; and the filling, excavation, or disturbance of soils and sediments, or the modification of a navigable waterway. Navigable waters of the United States are "waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce" (33 CFR 329.4).

Section 14 of Rivers and Harbors Act of 1899/Section 408

Section 14 of the Rivers and Harbors Act of 1899, codified as 33 USC 408 (Section 408) requires that any alteration of a public work (e.g., sea wall, bulkhead, jetty, dike, levee, wharf, pier, or other work) built by the United States not be injurious to the public interest and not impair the usefulness of the work. A Section 408 permit allowing such alterations must be obtained from USACE prior to Section 10/404 decisions.

Federal Executive Order 11988 – Floodplain Management

Executive Order 11988 requires federal agencies to avoid long- and short-term adverse impacts related to the occupancy and modification of flood plains to the greatest extent possible (42 FR 26951, 3 CFR, 1977 Comp., p. 117). In addition, federal agencies are required to avoid supporting the development of floodplains unless it is the only practicable alternative. Federal agencies are expected to take action in ways that reduce the risk of flood loss, minimize impacts of floods on human safety and health, and restore and preserve the values and functions of flood plains. USACE must consider the requirements of Executive Order 11988 when determining whether or not to issue a Department of Army permit (i.e., permit required for the discharge of dredged or fill material into waters of the United States).

National Flood Insurance Act and Flood Disaster Protection Act

The National Flood Insurance Act of 1968 led to the creation of the Federal Insurance Administration, and made flood insurance available for the first time (Federal Emergency Management Agency, 1997). The Flood Disaster Protection Act of 1973 required the purchase of flood insurance for properties located in Special Flood Hazard Areas. Both the National Flood Insurance Act and the Flood Disaster Protection Act aim to restrict development in floodplains to limit costs associated with disaster relief and reduce the need for flood protection structures.

3.9.1.2 State

Porter-Cologne Act

The RWQCB also asserts authority over waters of the state under the Porter-Cologne Act, which establishes a regulatory program to protect water quality and to protect beneficial uses of state waters. The Porter-Cologne Act empowers the RWQCB to formulate and adopt a Water Quality Control Plan that designates beneficial uses and establishes water quality objectives that in its judgment would ensure reasonable protection of beneficial uses. Each RWQCB establishes water quality objectives that will ensure the reasonable protection of beneficial uses and the prevention of water quality degradation. Dredge or fill activities with the potential to affect water quality in these waters must comply with Waste Discharge Requirements (WDR) issued by the RWQCB.

California Water Code

The term "waters of the state," under jurisdiction of the RWQCB, is defined by California Water Code as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code Section 13050(e)). This definition is broader than waters of the United States.

The State Water Resources Control Board (SWRCB) redefined wetlands as part of *Procedures for Discharges of Dredged or Fill Material to Waters of the State* (State Water Resources Control Board 2016). In April 2019, the Board adopted a new common, statewide definition and procedures for wetlands, which became effective on May 28, 2020. The USACE and U.S. EPA definition of wetlands are defined by hydrology, soils, and vegetation. The Board's definition refers to the same three factors, but also allows unvegetated areas (e.g., desert playas) to be classified as wetlands.

National Pollutant Discharge Elimination System

Section 402 of the Clean Water Act requires that a discharge of any pollutant or combination of pollutants to surface waters that are deemed waters of the United States be regulated by a NPDES permit. The NPDES permitting requirements are implemented, monitored, and enforced by the SWRCB and RWQCB. Programs to reduce pollutants carried by stormwater runoff into waters of the United States are to be developed for all communities with populations over 50,000. State or regional general permits regulating discharges are developed and implemented by the SWRCB and RWQCB. These permits aid in the enforcement of the program. Individual NPDES permits can be issued by the SWRCB and RWQCB to cover individual discharges and general permits can be issued to cover a group of discharges. The SWRCB can issue general permits on a statewide basis and the RWQCB can issue general permits on a regional basis.

Construction General Permit

In accordance with CWA Section 402(p) and similar to the goals of the Porter-Cologne Water Quality Control Act, a statewide NPDES General Permit for Stormwater Discharges Associated with Construction Activity (Order No. 2009-0009-DWQ, NPDES No. CAS000002, as amended by Order 2010-0014-DWQ and 2012-006-DWQ) (Construction General Permit) was issued by the SWRCB. Required coverage under this Construction General Permit occurs when a construction project disturbs more than one acre of land or that is part of a common plan of development or sale disturbing more than one acre of land. The landowner or applicable entity is required to file a Notice of Intent (NOI), Stormwater Pollution

Prevention Plan (SWPPP), and mail the permit fee to the SWRCB to obtain coverage by the Construction General Permit.

The Project site is more than one acre; therefore, the NPDES Construction General Permit (Order No. 2009-0009-DWQ, NPDES No. CAS000002) does apply.

Municipal General Permit

Permits for municipal stormwater discharges are mandated by CWA Section 402 and are regulated under the NPDES General Permit for MS4 Permits. Medium municipalities (serving between 100,000 and 250,000 people) and large municipalities (serving more than 250,000 people) are covered by Phase I MS4 Permit regulations. Small municipalities (serving less than 100,000 people) are covered by Phase II MS4 Permit regulations. These facilities include public campuses, military bases, and hospital and prison complexes.

To reduce the discharge of pollutants into stormwater to the maximum extent possible, programs and measures are developed and implemented by cities and counties as required by the MS4 Permits. Some of these include best management practices (BMP), control techniques, system designs, and engineering methods. These permit holders have created stormwater management plans for their individual locations as a part of the permit compliance. The plans lay out the framework for the requirements for construction sites, municipal operations, commercial and industrial businesses, and planning and land development. For specific projects under this program, the project applicants must follow the guidance outlined in the stormwater management plan per the permit holder of that location.

In California, SWRCB recommends the use of Low Impact Development (LID) to adhere to the municipal stormwater permits. To manage stormwater to sustain a site's predeveloped runoff rates and volumes, LID has incorporated site design which includes the use of retention basins and the minimizations of impervious surfaces.

The City of Los Angeles is a permittee under the current MS4 Permit for Los Angeles County (Order No. R4-2012-0175), as described further under Section 3.9.1.3, Los Angeles County Municipal Stormwater NPDES Permit (MS4 Permit).

3.9.1.3 Local

Los Angeles Basin Water Quality Control Plan (Basin Plan)

The California Water Code (Section 13240), as required by the CWA, requires the preparation and adoption of water quality control plans (Basin Plans). CWA Section 303 requires states to implement water quality standards that "consist of the designated uses of the navigable waters involved and the water quality criteria for such waters base upon such uses." California Water Code (Section 13050) states that Basin Plans consists of a list of beneficial uses to be protected, water quality objectives to protect those uses, and a program of operation needed for completing the water quality objectives within a specific area. The Basin Plans are regulatory references used to meet the state and federal requirements for water quality control. All inland surface waters, enclosed bays, and estuaries (including wetlands) in the Region are specified in the Basin Plan. The Basin Plan is currently undergoing a triennial review.

Water Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles

The General Waste Discharge Requirements for Discharge of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties (Order No. R4-2013-0095, NPDES No. CAG994004) is a regional general permit for groundwater discharge produced from dewatering operations or other wastewaters discharges that must be removed from a work location in order to proceed with construction.

The waste from construction dewatering (except stormwater) is regulated as a low-threat discharge to surface waters. To comply with this General Permit, an NOI and Report of Waste Discharge must be submitted to the Los Angeles RWQCB. Based on the depth of the groundwater, the proposed Project may require groundwater dewatering during construction and would be subject to the requirements of this General Permit.

Los Angeles County Municipal Stormwater NPDES Permit (MS4 Permit)

The current MS4 Permit for Los Angeles County (Order No. R4-2012-0175) was adopted on November 8, 2012, became effective December 28, 2012, and expired on December 28, 2017. Although this permit is expired, the permit states "if a new order is not adopted by the expiration date above, then the Permittees shall continue to implement the requirements of this Order until a new one is adopted" (Los Angeles Regional Water Quality Control Board, 2016). Los Angeles County Flood Control District, County of Los Angeles, and 84 incorporated cities within the watershed (including the city of Los Angeles and excluding the city of Long Beach) are included in Order No. R4-2012-0175 of the stormwater permit for the MS4s in the Los Angeles Region. As required by the permit, in order to reduce the discharge of pollutants from stormwater to the maximum extent possible (MEP), effectively prohibit non-stormwater discharges, and protect receiving waters, runoff must be addressed during the major phases of urban development. In order to reduce discharge of pollutants from stormwater to the MEP, protect receiving waters, and effectively prohibit non-stormwater discharges, runoff must be addressed during major phases of urban development.

For all "new development" and "redevelopment" projects that meet criteria as specified in the permit, the permit requires that prior to project completion, the design and implementation of specific post-construction controls to mitigate stormwater pollution. The permit bans non-stormwater discharges to the MEP during the operation of new or redevelopment. As identified in the Los Angeles Basin Water Quality Control Plan (Basin Plan), stormwater waste must meet water quality-based effluent limitations (WQBELs) or water quality standards for discharge and must not contribute to the exceedance of water quality standards for receiving waters. Each permittee is required to develop a Planning and Land Development Program for all new development, which requires permittees to:

1. Minimize the impacts on water quality from development by using smart growth practices such as safeguarding environmentally sensitive areas and directing development towards existing communities via infill or redevelopment.
2. Decrease the adverse impacts from stormwater runoff on the biological integrity of Natural Drainage Systems and the beneficial uses of water bodies in line with the requirements under CEQA (California Public Resources Code Section 21000 et seq.).

3. Decrease the impervious surfaces on land developments by minimizing soil compaction during construction, implementing project designs that minimize the impervious area footprint, and using the LID design principles to mirror pre-development hydrology via infiltration, evapotranspiration, and rainfall harvest and use.
4. Maintain and enhance riparian buffers when possible.
5. Decrease pollutant loadings from impervious structures through the use of appropriate BMPs, LIDs, and treatment control BMPs.
6. Properly select, design, and maintain LID and hydromodification control BMPs to address pollutants that are likely to be generated, reduce changes to pre-development hydrology, and assure long-term function.

Organize the selection of BMPs to remove stormwater pollutants, reduce stormwater runoff volume, and beneficially use stormwater to support an integrated approach to protecting water quality and managing water resources.

City of Los Angeles Development Construction Model Program

NPDES Phase II requirements on construction sites within incorporated city lands are addressed by the City of Los Angeles (City) Development Construction Model Program. The City's Reference Guide for Stormwater Best Practices includes BMPs for construction (City of Los Angeles Bureau of Sanitation, 2004). The BMPs are in line with those created by the state and county and include site management practices, erosion and sedimentation control measures, materials and waste management, and general preventative maintenance and inspection.

City of Los Angeles Low Impact Development Ordinance and Handbook

Ordinance Number 181899 in the City's Municipal Code imposes rainwater Low Impact Development (LID) strategies on projects that require building permits. The purpose of the ordinance is to:

- Promote rainwater harvesting
- Promote stormwater runoff management
- Promote water conservation
- Improve water quality
- Provide groundwater recharge
- Promote recycled water reuse and grey water use

The City's *Planning and Land Development Handbook for Low Impact Development* was created to assist developers in complying with the requirements of the City's Stormwater Program. The handbook reflects the latest LID requirements as defined by the NPDES Permit (NPDES No. CASOO4001) and the City's Municipal Code. The handbook summarizes the City's project review and permitting process, identifies stormwater mitigation measures, and references source and treatment control BMP information (City of Los Angeles, 2016).

3.9.2 Environmental Setting

3.9.2.1 Watershed

The Project Area is within the Los Angeles River Watershed, which covers approximately 834 square miles, equivalent to 533,760 acres (LA Stormwater, n.d.). The watershed is bounded by the Santa Monica, Santa Susana, and San Gabriel mountains to the north and west. The majority of the watershed is highly developed with residential, open space, agricultural, commercial, industrial, and transportation land uses. Much of the southern portion of the watershed captures runoff from urbanized areas, and approximately one-third of the watershed is covered with impervious surfaces.

3.9.2.2 Surface Waters and Local Hydrology

The LA River is the only major surface water that runs through the Project Area. The LA River is approximately 51 miles long, originating in the San Fernando Valley, and emptying into the San Pedro Bay near Long Beach (LA Stormwater, n.d.). Much of the LA River and its tributaries are channelized for flood protection. Within the Project Area, the USACE operates and maintains the flood control channel (U.S. Army Corps of Engineers, n.d.). The LA River flows south through the Project Area.

Water Quality and Beneficial Uses

The Project Area includes Los Angeles River Reach 2, which extends approximately 18.8 miles from Carson to Figueroa Street, and is included on the Final 2016 303(d) List of Impaired Waterbodies (California State Water Resources Control Board, 2019). The water quality impairments for Los Angeles River Reach 2 (Carson to Figueroa Street) are shown in **Table 3.9-1**.

Beneficial uses for Los Angeles River Reach 2 from the LARWQCB Basin Plan (Los Angeles Regional Water Quality Control Board, 2014) are included in **Table 3.9-2**.

The water quality impairments for the downstream receiving waters from the Project Site include:

- **LA River Reach 1 (Estuary to Carson Street):** Ammonia, Cadmium, Coliform Bacteria, Dissolved Copper, Cyanide, Diazinon, Lead, Nutrients (Algae), pH, Trash, and Dissolved Zinc;
- **LA River Estuary (Queensway Bay):** Chlordane (sediment), Dichloro-diphenyl-trichloroethane (DDT) (sediment), Polychlorinated biphenyl (PCB) (sediment), Sediment Toxicity, and Trash; and
- **San Pedro Bay Near/Off Shore Zones**: Chlordane, DDT (tissue and sediment), PCBs (sediment), and Sediment Toxicity (Tetra Tech, 2018b).

The LARWQCB Basin Plan provides the water quality objectives for all inland surface waters and enclosed bays and estuaries in the Region. **Table 3.9-3** includes the water quality constituents described in the Basin Plan and their objectives.

Table 3.9-1: TMDLs for Los Angeles River Reach 2 (Carson to Figueroa Street)

Listed Impairments	Potential Sources	First Year Listed	Estimated U.S. EPA TMDL Completion	Date[1]
Ammonia	Point and Nonpoint Sources	1996	Being addressed with U.S. EPA approved TMDL	2004
Copper	Unknown	2006	Being addressed with U.S. EPA approved TMDL	2005
Indicator Bacteria	Unknown	2014	Being addressed with U.S. EPA approved TMDL	2012
Lead	Point and Nonpoint Sources	1996	Being addressed with U.S. EPA approved TMDL	2005
Nutrients (Algae)	Point and Nonpoint Sources	1996	Being addressed with U.S. EPA approved TMDL	2004
Oil	Natural Sources	1996	TMDL Required	2019
Trash	Nonpoint Source, Surface Runoff, and Urban Runoff/Storm Sewers	1996	Being addressed with U.S. EPA approved TMDL	2008

1. Date of TMDL scheduled completion or U.S. EPA approved TMDL
Source: (California State Water Resources Control Board, 2019)

Table 3.9-2: Beneficial Uses for Los Angeles River Reach 2 (Carson to Figueroa Street)

Beneficial Use	Designation
Municipal and Domestic Supply (MUN)	Potential
Industrial Service Supply (IND)	Potential
Ground Water Recharge (GWR)	Existing
Warm Freshwater Habitat (WARM)	Existing
Wildlife Habitat (WILD)	Potential

Source: (Los Angeles Regional Water Quality Control Board, 2014)

Table 3.9-3: Water Quality Objectives Provided in the Water Quality Control Plan for the LARWQCB Basin Plan

Water Quality Constituent	Water Quality Objective
Ammonia	For inland surface waters not characteristic of freshwater, the four-day average concentration of unionized ammonia shall not exceed 0.035 milligrams per liter (mg/L) and the one-hour average concentration shall not exceed 0.233 mg/L.
Bacteria	In waters designated for non-water contact recreation (REC-2) and not designated for water contact recreation (REC-1), the fecal coliform concentration shall not exceed a log mean of 2000/100 ml (based on a minimum of not less than four samples for any 30-

Water Quality Constituent	Water Quality Objective
	day period), nor shall more than 10 percent of sampled collected during any 30-day period exceed 4000/100 ml.
Bioaccumulation	Toxic pollutants shall not be present at levels that will bioaccumulate in aquatic life to levels which are harmful to aquatic life or human health.
Biochemical Oxygen Demand (BODs)	Waters shall be free of substances that result in increases in the BOD which adversely affect beneficial uses.
Biostimulatory Substances	Waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.
Chemical Constituents	Surface waters shall not contain concentration of chemical constituents in amounts that adversely affect any designated beneficial use.
Chlorine, Total Residual	Chlorine residual shall not be present in surface water discharges at concentration that exceed 0.1 mg/L and shall not persist in receiving waters at any concentration that causes impairment of beneficial uses.
Color	Waters shall be free of coloration that causes nuisance or adversely affects beneficial uses.
Exotic Vegetation	Exotic vegetation shall not be introduced around stream courses to the extent that such growth causes nuisance or adversely affects beneficial uses.
Floating Material	Waters shall not contain floating materials, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.
Methylene Blue Activated Substances (MBAS)	Waters shall not have MBAS concentrations greater than 0.5 mg/L in water designated MUN.
Nitrogen (Nitrate, Nitrite)	Waters shall not exceed 10 mg/L nitrogen as nitrate-nitrogen plus nitrite-nitrogen (NO_3-N + NO_2-N), 45 mg/L as nitrate (NO_3), 10mg/L as nitrate-nitrogen (NO_3-N), or 1 mg/L as nitrite-nitrogen (NO_2-N).
Oil and Grease	Waters shall not contain oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the water's surface or on objects in the water, that cause nuisance, or that otherwise adversely affect beneficial uses.
Oxygen, Dissolved (DO)	At a minimum, the mean annual dissolved oxygen concentration of all waters shall be greater than 7 mg/L, and no single determination shall be less than 5.0 mg/L, except when natural conditions cause lesser concentrations.
Pesticides	No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.
pH	The pH of inland surface waters shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharges. Ambient pH levels shall not be changed more than 0.5 units from natural conditions as a result of water discharge.

Water Quality Constituent	Water Quality Objective
Polychlorinated Biphenyls (PCBs)	The purposeful discharge of PCBs (the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260) to waters if the Region, or at locations where the waste can subsequently reach waters of the Region, is prohibited. Pass-through or uncontrollable discharges to waters of the Region, or at locations where the waste can subsequently reach water of the Region, are limited to 70 picograms per liter (30 day average) for protection of human health and 14 nanograms per liter (ng/L) and 30 ng/L (daily average) to protect aquatic life in inland fresh waters and estuarine waters respectively.
Priority Pollutants	The water quality criteria for metals contained in the California Toxics Rule (CTR) are expressed as a function of a water-effect ratio (WER). In the CTR, the U.S. EPA has provided for the adjustment of these water quality criteria through the application by States of the WER procedure. The WER has a default value of 1.0 unless a site-specific WER is approved by the Regional Board. To use a WER other than the default of 1.0, a study must be conducted, establishing the ratio that represents the difference between toxicity in laboratory test water and toxicity in a specific water body based on ambient conditions. The study must be consistent with U.S. EPA procedures on deriving WERs. Notwithstanding the provisions below, regulatory actions to achieve applicable criteria, as modified by site-specific WERs, must ensure that downstream standards will also be achieved. Additional receiving water monitoring shall be required of dischargers subject to site-specific WER(s) to evaluate whether criteria, as modified by the WER(s), are as protective of beneficial uses as the CTR criteria are intended to be.
Radioactive Substances	Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life or that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.
Solid, Suspended, or Settleable Materials	Waters shall not contain suspended or settleable material in concentrations that cause nuisance or adversely affect beneficial uses.
Taste and Odor	Waters shall not contain taste or odor-producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible aquatic resources, cause nuisance, or adversely affect beneficial uses.
Temperature	The natural receiving water temperature of all regional waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Board that such alteration in temperature does not adversely affect beneficial uses.
Toxicity	All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in, human, plant, animal, or aquatic life.
Turbidity	Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increases in natural turbidity attributable to controllable water quality factors shall not exceed the following limits:

Water Quality Constituent	Water Quality Objective
	Where natural turbidity is between 0 and 50 Nephelometric Turbidity Units (NTU), increases shall not exceed 20%. Where natural turbidity is greater than 50 NTU, increases shall not exceed 10%.

Source: (Los Angeles Regional Water Quality Control Board, 2014)

3.9.2.3 Site Hydrology

The Project Site currently consists of vacant lots and a construction site for the Viaduct Replacement Project. The Project Area is primarily pervious, with the exception of paved roadways and a few areas of asphalt and concrete paving. The existing impervious surface areas are summarized in **Table 3.9-4.**

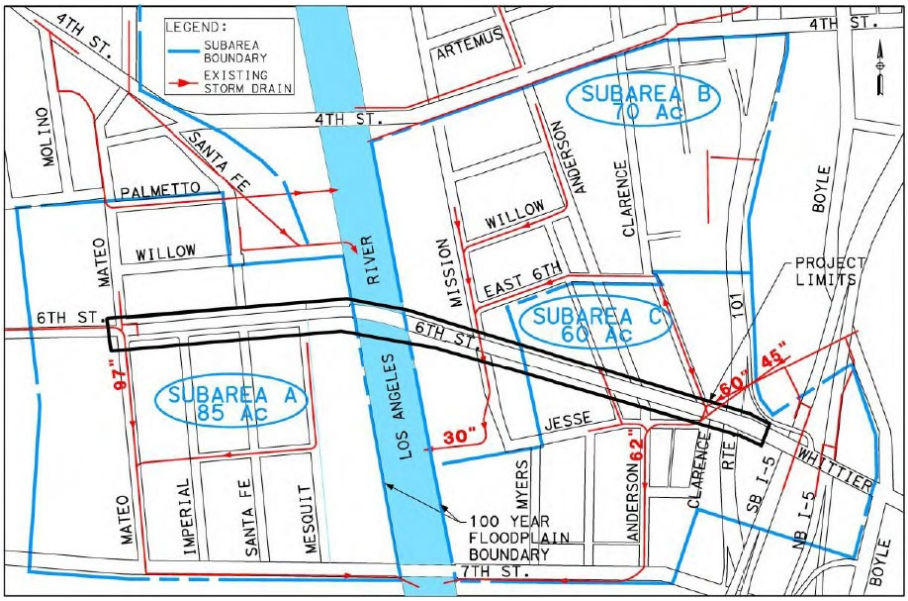
Table 3.9-4: Existing Impervious Surfaces

Location	Total Area (Acres)	Existing Impervious Area (Acres)	Existing Impervious Percentage (%)
Proposed Project Site			
West Park	1.93	0.23	12
Arts Plaza	1.62	1.52	94
East Park	7.34	0.22	3
Streets			
Santa Fe Avenue	0.32	0.31	97
Mission Road	0.55	0.50	91
Anderson Street	0.49	0.46	94
Clarence Street	0.34	0.31	91
Total Impervious Surfaces			
Total	12.59	3.55	28

Runoff generally sheet flows across the Project Site into the adjacent roadways, where it is drained by several separate stormwater drain systems that run along the major streets in the Project Area and ultimately drain into the LA River (see **Figure 3.9-1**, Local Stormwater Drain Systems).

The City and LA County maintain the existing catch basins in the Project Area, and the City maintains storm drains in the Project Area. There are no known existing capacity issues associated with the stormwater drainage facilities that receive flows from the Project Site (Los Angeles County Department of Public Works, n.d.). The topography throughout the Project Site is relatively flat (see **Figure 3.9-2**, Topography). Recent improvements to the hydraulic performance of the LA River resulted from the removal of the center pier of the Viaduct, which was demolished during the construction of the Viaduct Replacement Project.

Figure 3.9-1: Local Stormwater Drain Systems



Source: (California Department of Transportation and City of Los Angeles, 2011)

Table 3.9-5 summarizes the peak flow rates of the existing drainage area that encompasses the proposed Project Site and adjacent street areas. The drainage area extends beyond the boundaries of the proposed Project Site because it includes the total land area where precipitation collects and drains into a common outlet.

Table 3.9-5: Existing 24-Hour Design Storm Events

Drainage Subarea	Drainage Area (Acres)	Drainage Impervious Surface Area (Acres)	Percent Impervious Surface Area (%)	2-year (cfs)	5-year (cfs)	10-year (cfs)	25-year (cfs)	50-year (cfs)
Proposed PARC Areas	11.03	1.79	16	4.53	10.51	14.61	19.96	25.33
Adjacent Street Areas	6.03	5.36	89	4.02	7.25	9.48	12.46	15.12
Total	17.06	7.15	42	8.55	17.76	24.09	32.42	40.45

cfs = cubic feet per second
Source: (Los Angeles County Department of Public Works, 2006)

Figure 3.9-2: Topography

FIGURE 3.9-2. TOPOGRAPHY
Sixth Street PARC Project

3.9.2.4 Groundwater Hydrology

Regional Groundwater Hydrology

The Project Area is in the Central Subbasin (Subbasin), which covers an area of approximately 177,000 acres in the southeastern portion of the Coastal Plain of Los Angeles Groundwater Basin (California Department of Water Resources, 2004). The Subbasin is bounded on the north by the La Brea high; on the northeast and east by the Elysian, Repetto, Merced, and Puente Hills; on the southeast by Coyote Creek; and on the southwest by the Newport Inglewood fault system. Average precipitation ranges from 11 to 13 inches throughout the Subbasin, with an average of about 12 inches.

Throughout the Subbasin, groundwater occurs at relatively shallow depths in Holocene and Pleistocene age sediments. Groundwater levels throughout the Subbasin have varied over a range of about 25 feet between 1961 and 1977 and have varied through a range of about 5 to 10 feet since 1996 (California Department of Water Resources, 2004).

The Subbasin has not been identified as a critically overdrafted basin (i.e., the average annual amount of groundwater extraction exceeds the long-term average annual supply of water to the basin) (California Department of Water Resources, 2019). Surface flows from the San Gabriel Valley are the major source of replenishment of the groundwater supply in the Subbasin. Groundwater also enters from surface and subsurface flow, and percolation of precipitation, stream flow, and imported and recycled water. Percolation is limited in some areas due to the amount of paved surfaces, and saltwater intrusion occurs in the basin.

Beneficial uses for the Subbasin from the LARWQCB Basin Plan (Los Angeles Regional Water Quality Control Board, 2014) are included in **Table 3.9-6**.

Table 3.9-6: Beneficial Uses for the Central Subbasin

Beneficial Use	Designation
Municipal and Domestic Supply (MUN)	Existing
Industrial Service Supply (IND)	Existing
Industrial Process Supply (PROC)	Existing
Agricultural Supply (AGR)	Existing

Source: (Los Angeles Regional Water Quality Control Board, 2014)

The LARWQB Basin Plan provides the water quality objectives for all ground waters of the Region. **Table 3.9-7** includes the water quality constituents described in the Basin Plan and their objectives.

Table 3.9-7: Regional Objectives for Ground Waters in the LARWQCB Basin Plan

Water Quality Constituent	Water Quality Objective
Bacteria	In ground waters used for MUN the concentration of coliform organisms over any seven day period shall be less than 1.1/100 ml.
Chemical Constituents and Radioactivity	Ground waters designated for use as MUN shall not contain concentrations of chemical constituents and radionuclides in excess of the limits specified in the following provisions of Title 22 of the California Code of Regulations which are incorporated by reference into the following tables of the Basin Plan: Table 64431-A of Section 64431 (Inorganic Chemicals), Table 64444-A of Section 64444 (Organic Chemicals), Table 64442 of Section 64442 (Gross Alpha Particle Activity, Radium-226, Radium-228, and Uranium), and Table 64443 of Section 64443 (Beta Particle and Photon Radioactivity). This incorporation by reference is prospective including future changes to the incorporated provisions as the changes take effect. See Tables 3-8, 3-9, 3-12a, and 3-12b of the Basin Plan. Ground waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use.
Mineral Quality	Numerical mineral quality objectives for the Subbasin include: • TDS: 700 mg/l • Sulfate: 250 mg/l • Chloride: 150 mg/l • Boron: 1.0 mg/l
Nitrogen (Nitrate, Nitrite)	Ground waters shall not exceed 10 mg/L nitrogen as nitrate-nitrogen plus nitrite-nitrogen (NO_3-N + NO_2-N), 45 mg/L as nitrate (NO_3), 10 mg/L as nitrate-nitrogen (NO_3-N), or 1 mg/L as nitrite-nitrogen (NO_2-N).
Taste and Odor	Ground waters shall not contain taste or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.

MUN = Municipal and Domestic Supply; ml = Milliliter; TDS = Total Dissolved Solids; mg/l = Milligram/Liter
Source: (Los Angeles Regional Water Quality Control Board, 2014)

Local Groundwater Hydrology

Based on the Foundation Report for the Viaduct Replacement Project, measured groundwater elevations varied significantly throughout the Project Area and ranged from 170.9 to 228 feet (Earth Mechanics, Inc., 2015). Groundwater was not encountered in any of the boreholes performed during the investigations for the proposed Project (Hushmand Associates, Inc., 2018). This is likely because soil boring depths for the Viaduct Replacement Project, which varied from 3 to 200 feet, were deeper than the boring depths for the proposed Project, which varied from 5.67 to 39.08 feet (Earth Mechanics, Inc., 2015; Hushmand Associates, Inc., 2018). In addition, groundwater may fluctuate due to factors such as seasonal variation, nearby construction, irrigation, or other man-made and natural influences (Earth Mechanics, Inc., 2015).

There is one groundwater supply well that is within the Project Area, located on East Sixth Street near South Clarence Street (California State Water Resources Control Board, 2017). There are several groundwater wells in proximity to the Project Area: 11 environmental monitoring wells near Mateo Street and Seventh Street (approximately 780 feet south of Project Site) and three environmental monitoring wells near Palmetto Street and Seaton Street (approximately 880 feet northwest of Project Site).

As described in Section 3.8, the Los Angeles County Metropolitan Transportation Authority (Metro) 20 site at 590 South Santa Fe Avenue is in the process of implementing remediation of a groundwater and deep soil contamination plumes that extend under the proposed Arts Plaza. This contamination was from leaking underground structures previously located on the Metro site. The work is being performed under a Voluntary Cleanup Agreement between Metro, the U.S. EPA, and the Department of Toxic Substances Control (DTSC).

3.9.2.5 Geology and Soils

As described in Section 3.6, the Project Area is located in a region with Holocene age Quaternary alluvial deposits fan consisting of sand, silt, and gravel (Hushmand Associates, Inc., 2018). According to the Foundation Report for the Viaduct Replacement Project (Earth Mechanics, Inc., 2016), the Project Area is underlain with:

- Artificial Fill: Generally consists of disturbed and reworked alluvial sands, silts, and gravels, varying up to 15 feet thick in the Project Area, due to recent construction along the LA River.
- Quaternary Alluvium: Holocene to Pleistocene age alluvium consisting of active stream channel and unconsolidated floodplain deposits of gravel, sand, silt, and hardened remnants of older deposits.
- Fernando Formation, Upper (Pico) and Lower (Repetto) Members: Pliocene-age marine deposits consisting of tan to olive brown, semi-friable sandstone and conglomerate, in addition to gray to greenish gray, soft, poorly bedded marine claystone, and siltstone.

According to the Web Soil Survey, soils underlying the proposed West Park, Arts Plaza, and East Park are classified as “urban land, commercial, 0 to 5 percent slopes” (Natural Resources Conservation Service, 2017). The portions of the Project Site that include the LA River are underlain with soils classified as “urban land, frequently flooded, 0 to 5 percent slopes.”

Based on the borehole investigation from the *Geotechnical Site Investigation* prepared for the proposed Project, subsurface conditions consisted of about 5 to 20 feet of fill soils consisting of loose to medium dense silty sand to poorly graded sand with silt (Hushmand Associates, Inc., 2018). The fill is underlain by generally dense to very dense coarse grained materials comprising of sands, silty sands, gravelly sands, sandy gravels, cobbles, and possibly boulders.

3.9.2.6 Floodplain

The Project Area is included on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map Numbers 06037C1637F and 06037C1636F (Federal Emergency Management Agency, 2008). The Project Area includes the LA River, which is a major floodway; however, flood water is confined within the levees. The remaining portions of the Project Area are located in Zone X, which are areas determined to be outside of the 500-year floodplain (see **Figure 3.9-3**, Floodplain).

Figure 3.9-3: Floodplain

Source: FEMA, 2008

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FIGURE 3.9-3. FLOODPLAIN
Sixth Street PARC Project

3.9.3 Environmental Impact Analysis

3.9.3.1 Methodology

Impacts were analyzed qualitatively based on professional judgment in light of the hydrologic and hydraulic analyses prepared for the proposed Project design. The analysis focused on issues related to water and wastewater facilities, flood risks, groundwater quality, and surface water hydrology. Information from the *Preliminary Hydrology and Hydraulics Report* (Tetra Tech, 2018a), the *Conceptual Low Impact Development Report* (Tetra Tech, 2018b), and the *Geotechnical Site Investigation* report (Hushmand Associates, Inc., 2018) prepared for the proposed Project provided the data for the following analysis.

3.9.3.2 Screening Analysis

Several impacts and corresponding thresholds of significance in the following section were eliminated from further analysis in this EIR. Topics were eliminated if the IS for the proposed Project concluded there would be "No Impact," or if impacts were identified to be "Less Than Significant… and will not be discussed further in the EIR." Therefore, only the topics described in the section below were determined to require further analysis in this EIR. A copy of the Initial Study, which contains the eliminated topics, is provided in Appendix A.

3.9.3.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and the *L.A. CEQA Thresholds Guide*, the proposed Project would have a significant impact on Hydrology and Water Quality if it would:

X(b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

> *G.2 Surface Water Quality.* A project would normally have a significant impact on surface water quality if discharges associated with the project would create pollution, contamination or nuisance as defined in Section 13050 of the California Water Code (CWC) (see definitions below) or that cause regulatory standards to be violated, as defined in the applicable NPDES stormwater permit or Water Quality Control Plan for the receiving water body.
>
> *G.3 Groundwater Level.* A project would normally have a significant impact on groundwater level if it would:
>
> - Change potable water levels sufficiently to:
>   - Reduce the ability of a water utility to use the groundwater basin for public water supplies, conjunctive use purposes, storage of imported water, summer/winter peaking, or to respond to emergencies and drought;
>   - Reduce yields of adjacent wells or well fields (public or private); or
>   - Adversely change the rate or direction of flow of groundwater; or
> - Result in demonstratable and sustained reduction of groundwater recharge capacity

X(c) 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 manner 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 offsite.

(iii) 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.

(iv) Impede or redirect flood flows.

G.1 Surface Water Hydrology. A proposed project would normally have a significant impact on surface water hydrology if it would:

- Cause flooding during the projected 50-year developed storm event, which would have the potential to harm people or damage property or sensitive biological resources;
- Substantially reduce or increase the amount of surface water in a water body; or
- Result in a permanent, adverse change to the movement of surface water sufficient to produce a substantial change in the current or direction of water flow.

G.2 Surface Water Quality. A project would normally have a significant impact on surface water quality if discharges associated with the project would create pollution, contamination or nuisance as defined in Section 13050 of the CWC (see definitions below) or that cause regulatory standards to be violated, as defined in the applicable NPDES stormwater permit or Water Quality Control Plan for the receiving water body.

G.3. Groundwater Level. A project would normally have a significant impact on groundwater level if it would:

• Change potable water levels sufficiently to:

- Reduce the ability of a water utility to use the groundwater basin for public water supplies, conjunctive use purposes, storage of imported water, summer/winter peaking, or to respond to emergencies and drought;

- Reduce yields of adjacent wells or well fields (public or private); or

- Adversely change the rate or direction of flow of groundwater; or

• Result in demonstrable and sustained reduction of groundwater recharge capacity.

X(e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

3.9.3.4 Construction Impacts

X(b): 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?

Throughout the Project Area, excavation depths are expected to range up to approximately 5 feet for general earthwork, 10 feet for construction of retaining walls, 15 feet for utility trenching, and 22 feet for the removal of portions of the existing LA River Access Tunnel and existing Viaduct foundations. Because measured groundwater elevations ranged from 170.9 to 228 feet and groundwater was not encountered in boring depths up to 39.08 feet, groundwater is not anticipated to be encountered during excavation activities for the proposed Project (Hushmand Associates, Inc., 2018). If groundwater is encountered, the contractor would develop a dewatering plan, and a Dewatering Permit with the Los Angeles RWQCB would also be required.

To evaluate the net increase in impervious surface area as a result of the proposed Project, the baseline condition was defined as the No Project condition. As shown in **Table 3.9-8**, the No Project condition would consist of 7.5 acres (60 percent) of impervious surface area. Under the proposed Project conditions, which include the developed park, roadway improvements, and constructed Viaduct overhead, the Project Site would consist of 8.9 acres (71 percent) of impervious surface area. Therefore, the net increase in impervious surface area as a result of the proposed Project would be 1.4 acres.

The net impervious surface area that the proposed Project would add (1.4 acres) represents 11 percent of the approximately 12.6-acre Project Site and approximately .001 percent of the 177,000-acre Subbasin. Therefore, the reduction of area for surface recharge would be relatively minor when compared to the area of the Subbasin. Because the Subbasin is not critically overdrafted, and given the average precipitation of the Subbasin (12 inches) and depth to groundwater at the Project Site (170.9 to 228 feet), the increase in impervious surface area is not anticipated to substantially reduce groundwater levels. The proposed Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the proposed Project may impede sustainable groundwater management of the basin. Therefore, impacts would be less than significant and mitigation is not required.

X(c): 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 manner which would:

(i) Result in substantial erosion or siltation on- or off-site?

The Project Site is relatively flat. Proposed construction activities would result in temporary changes to the drainage pattern of the Project Site. During construction, the proposed Project would require grading of the entire Project Site (approximately 17,000 cubic yards), excavation to remove hazardous soils (approximately 16,700 cubic yards), and trenching to access below-ground utilities (approximately 35,000 linear feet).

These construction activities would result in erosion and sediment transport, which could increase pollutants in stormwater runoff and receiving waters. To minimize erosion and siltation, the Project Site would be graded to divert water away from structures and from the tops of slopes into existing drainages

Table 3.9-8: Net Impervious Surface Area

Location	Total Acreage (Acres)	Existing Impervious Area (Acres)	Existing Impervious Percentage (%)	Impervious Area to be Removed by the proposed Project	Impervious Area to be Removed under Viaduct	Proposed Project Impervious Area[1] (Acres)	Proposed Project Impervious Percentage[1] (%)	No Project Impervious Area[2] (Acres)	No Project Impervious Percentage[2] (%)	Net Impervious Area[3] (Acres)
Proposed Project Site										
West Park	1.93	0.23	12	0.23	0	0.90	47	0.62	32	0.28
Arts Plaza	1.62	1.52	94	0.77	0.55	1.27	78	1.34	83	-0.07
East Park	7.34	0.22	3	0.22	0	5.05	69	3.93	54	1.12
Total	10.89	1.97	18	1.22	0.55	7.22	66	5.89	54	1.33
Streets										
Santa Fe Avenue	0.32	0.31	97	0.22	0	0.32	100	0.32	100	0.00
Mission Road	0.55	0.50	91	0.39	0	0.55	100	0.53	96	0.02
Anderson Street	0.49	0.46	94	0.19	0	0.49	100	0.47	96	0.02
Clarence Street	0.34	0.31	91	0.12	0	0.34	100	0.33	97	0.01
Total	1.70	1.58	93	0.92	0	1.70	100	1.65	97	0.05
Total Impervious Surfaces										
Total	12.59	3.55	28	2.14	0.55	8.92	71	7.54	60	1.38

1. Under the proposed Project condition, the Project Site would include the developed park, roadway improvements, and constructed Viaduct overhead.

2. Under the No Project condition, the proposed Project Site would not be developed into a park and would remain vacant land with the constructed Viaduct overhead.

3. The net impervious area is equal to the difference between the proposed Project impervious area and the No Project impervious area.

and catch basins. In addition, the proposed Project would comply with the provisions of the NPDES MS4 Permit, which requires the implementation of construction site BMPs to control erosion and sedimentation. A Notice of Intent (NOI) for stormwater discharges associated with construction activities may also be required under the NPDES General Permit. Because the area of proposed construction activities exceeds one acre, a SWPPP would be implemented during the construction phase, which would include BMPs to control erosion and siltation, including silt fencing, fiber rolls, sandbag barriers, drainage inlet protections, and berms at the top of all grade slopes. Stormwater BMPs would follow the latest California Stormwater Quality Association's Stormwater Best Management Practices Handbook (California Stormwater Quality Association, 2003). The proposed Project would incorporate drainage designs that direct stormwater runoff or irrigation runoff away from structures or the top of the slopes. No stormwater would be allowed to discharge over the top of a cut or fill slope. All entrances and exits to the construction site would be stabilized to reduce transport of sediment off-site. Any sediment or other materials tracked off-site would be removed within a reasonable time.

Excavation depths are expected to range from 5 to 22 feet. Because measured groundwater elevations ranged from 170.9 to 228 feet and groundwater was not encountered in boring depths up to 39.08 feet, the need for dewatering is not anticipated (Hushmand Associates, Inc., 2018). If groundwater is encountered, the dewatering plan would include measures to reduce erosion or siltation, in compliance with the requirements of the Los Angeles RWQCB Dewatering Permit.

During Phase II of construction, reinforced concrete planted terraces would be anchored into the existing slope liner on the west and east banks of the LA River. Construction activities within the LA River include installing anchors into the existing slope liner, transporting soil, constructing concrete terraces, and potential future landscaping. The exposure and transport of soil has the potential to increase erosion of bare ground and increase sediment in stormwater runoff. However, as described above, the SWPPP developed for the proposed Project would include BMPs to control erosion and siltation in compliance with NPDES requirements. All work is anticipated to be above the ordinary highwater mark; therefore, a 401/404 permit may not be required. However, as described in Section 3.3, Biological Resources (3.3.1.2) a CDFG Section 1602 Streambed Alteration Agreement from the CDFW would be required as would a CWA Section 408 permit from USACE.

Water diversion is not anticipated to be needed because Phase II construction activities, which include installing anchors into the existing slope liner, transporting soil, constructing concrete terraces, and potential future landscaping, would be performed during the dry season (April 15 through October 15). However, if work in a flowing stream is unavoidable, a water diversion plan would be required, and the entire stream flow would be diverted around the work area by a barrier, temporary culvert, new channel, or other means approved by the CDFW. Should water diversion be necessary, a 401/404 permit would be required (**BMP-HYDRO-13**).

An emergency evacuation plan would be prepared for Phase II construction within the LA River. If measurable rain with 25 percent or greater probability is predicted within 72 hours during project-related activities, all activities within the LA River would cease and protective measures to prevent siltation/erosion would be implemented/maintained (**BMP-HYDRO-13**). With the implementation of BMPs, alterations to drainage patterns during construction in the LA River channel would not result in substantial erosion or siltation onsite or offsite.

The proposed Project would not alter the course of any surface water. In addition, the proposed Project would not result in a substantial alteration to existing drainage patterns that would cause substantial erosion or siltation onsite or offsite. Because the proposed Project would comply with all applicable federal, state, and local requirements to reduce the potential for erosion and siltation onsite and offsite, impacts would be less than significant and no mitigation is required.

(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

As described above, construction of the proposed Project would include grading, excavating, and trenching, which could result in temporary changes to the drainage pattern of the Project Site. Impervious surfaces over the proposed Project Site (including the Viaduct overhead) would increase by approximately 1.4 acres, from approximately 7.5 acres (60 percent) to 8.9 acres (71 percent). Therefore, the rate and amount of surface runoff from the Project Site is expected to marginally increase. The Project Site would also be graded to divert water away from structures and from the tops of slopes into drainages and catch basins to prevent flooding onsite or offsite. Construction BMPs would also be included in the MS4 permit that would minimize the potential for flooding.

The proposed Project would not require dewatering. Should dewatering be required, the proposed Project would comply with the General Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties (Order No. R4-2013-0095, NPDES No. CAG994004) to ensure that the proposed Project would not result in flooding onsite or offsite during construction activities. Therefore, flooding from changes to drainage patterns or increases in surface runoff is not anticipated.

Water diversion is not anticipated to be needed for Phase II construction activities, which include installing anchors into the existing slope liner, transporting soil, constructing concrete terraces, and potential future landscaping, would be performed during the dry season (April 15 through October 15). However, if work in a flowing stream is unavoidable, a water diversion plan would be required, and the entire stream flow would be diverted around the work area by a barrier, temporary culvert, new channel, or other means approved by the CDFW. Should water diversion be necessary, a 401/404 permit would be required (**BMP-HYDRO-13**).

The concrete terraces would be constructed above the ordinary high water mark (see **Figure 2-6**), In addition, the removal of the center pier of the former Viaduct in 2016 reduced the water surface elevation of the LA River by about 13.8 feet (HNTB Corporation, 2015). Construction of the terraces would not raise the water surface elevation to levels greater than 13.8 feet (i.e., pre-Viaduct demolition conditions). Therefore, impacts to the capacity of the LA River are not anticipated.

As such, flooding from changes to the existing drainage pattern of the LA River is not anticipated. The proposed Project would not substantially alter the existing drainage pattern of the site or area or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite; therefore, impacts would be less than significant, and no mitigation is required.

(iii) 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?

Impervious surfaces over the proposed Project Site (including the Viaduct overhead) would increase by approximately 1.4 acres, from approximately 7.5 acres (60 percent) to 8.9 acres (71 percent). Because the proposed Project would reduce the pervious surface area for groundwater recharge, runoff from the Project Site is expected to marginally increase. However, the existing streets and below-grade drainage systems had sufficient capacity to convey runoff from the Project Site, when it was fully developed, with nearly 100 percent impervious surface cover (prior to the construction of the Viaduct Replacement Project).

The proposed Arts Plaza is underlain with contaminated soil and groundwater from the Metro 20 site. The site is currently undergoing remediation under a Voluntary Cleanup Agreement between Metro, U.S. EPA, and DTSC. Proposed construction activities would include grading of the entire Project Site and excavation to remove hazardous soils. The handling, storage, and disposal of contaminants would comply with all applicable federal, state, and local requirements. The Project Site would be remediated to standards acceptable by the Los Angeles County Fire Department (LACoFD) and other regulatory agencies as required, thereby reducing the area affected by contaminants. Therefore, proposed construction activities would not worsen the existing contamination.

The City would coordinate with Metro, U.S. EPA, LACoFD, and DTSC during construction activities. Any non-stormwater discharge would be controlled and properly disposed of through the sanitary sewer system or transported to an approved processing facility to prevent the further contamination of site soils and groundwater. In addition, the proposed Project would include construction BMPs identified in the MS4 permit and SWPPP, including erosion control, sediment control, and waste management BMPs. With implementation of BMPs, which would prevent construction pollutants from entering the LA River, impacts would be less than significant, and mitigation would not be required.

(iv) Impede or redirect flood flows?

As described in Section 3.9.2.6, the Project Area includes the LA River, which is a major floodway with flood flows that are confined within the levees. The remaining portions of the Project Area are located in Zone X, which are areas determined to be outside of the 500-year floodplain. For Phase I, construction staging would be confined to the Project Site in areas outside of the LA River. Phase II construction activities for the proposed River Gateway (i.e., installing anchors into the existing slope liner, transporting soil, constructing concrete terraces, and potential future landscaping) would occur within the 100-year flood hazard area.

There is potential for construction equipment to leak substances that would contaminate stormwater and groundwater. However, the proposed Project would implement stormwater BMPs identified in the MS4 permit and SWPPP, which would reduce the risk of release of pollutants. As described in Section 3.3, vehicles and equipment would be checked daily for fluid and fuel leaks, and drip pans would be placed under all equipment that is parked and not in operation (**BMP-BIO-10**).

To minimize impacts related to flooding, all construction activities within the LA River are anticipated to be performed during the dry season (April 15 through October 15). A water diversion plan is not anticipated for the proposed Project because Phase II construction activities; however, if work in a

flowing stream is unavoidable, a water diversion plan would be required, and the entire stream flow would be diverted around the work area by a barrier, temporary culvert, new channel, or other means approved by the CDFW. Should water diversion be necessary, a 401/404 permit would be required.

An emergency evacuation plan would be prepared for Phase II construction within the LA River. If measurable rain with 25 percent or greater probability is predicted within 72 hours during project-related activities, all activities within the LA River would cease and protective measures to prevent siltation/erosion would be implemented/maintained. With the implementation of BMPs, alterations to drainage patterns during construction in the LA River channel would not result in substantial erosion or siltation onsite or offsite.

As discussed above, the concrete terraces would be constructed above the ordinary high water mark (see **Figure 2-6**), In addition, the removal of the center pier of the former Viaduct in 2016 reduced the water surface elevation of the LA River by about 13.8 feet (HNTB Corporation, 2015). Construction of the terraces would not raise the water surface elevation to levels greater than 13.8 feet (i.e., pre-Viaduct demolition conditions). Therefore, impacts to the capacity of the LA River are not anticipated.

Proposed Project construction would not place structures within a 100-year flood hazard area that would impede or redirect flood flows; therefore, impacts would be less than significant, and mitigation would not be required.

X(e): Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

A water quality control plan is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. The proposed Project is located within the Los Angeles Basin Water Quality Control Plan (Basin Plan), which serves as a regulatory reference used to meet the state and federal requirements for water quality control. All inland surface waters, enclosed bays, and estuaries (including wetlands) in the Region are specified in the Basin Plan. In addition, according to the Sustainable Groundwater Management Act (SGMA), locals Groundwater Sustainability Agencies (GSA) must develop and implement groundwater sustainability plans (GSP) for managing and using groundwater without causing undesirable results, including significant groundwater-level declines, groundwater-storage reductions, seawater intrusion, water-quality degradation, land subsidence, and surface-water depletions.

As stated in Section 3.9.2.4, there is one water supply well in the Project Area. Proposed construction activities would comply with all applicable federal, state, and local requirements to reduce the potential for the release of hazardous waste and other contaminants into groundwater. In addition, construction activities would be subject to the provisions of the CWA and Porter-Cologne Act; NPDES permitting requirements; and other federal, state, and local requirements to ensure that stormwater pollutants resulting from construction would not substantially degrade water quality. A SWPPP would also be prepared, which would require the implementation of water quality construction BMPs to prevent, control, and reduce stormwater pollutants. Therefore, the proposed Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Impacts would be less than significant, and no mitigation is required.

3.9.3.5 Operational Impacts

X(b): 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?

Although the proposed Project would add new permeable surfaces such as decomposed granite and landscaped areas, the operation of the proposed Project would result in a net increase of 1.4 acres of impervious surface area from approximately 7.5 acres (60 percent) to 8.9 acres (71 percent) due to the construction of hardscaping, sports courts, buildings, playgrounds, and other public amenities. Therefore, the proposed Project would reduce pervious surface area for groundwater recharge.

The net impervious surface area that would be added (1.4 acres) represents 11 percent of the 12.6-acre project site and .001 percent of the 177,000-acre Subbasin. Therefore, the reduction of area for surface recharge would be relatively minor when compared to the area of the Subbasin. Because the Subbasin is not critically overdrafted, and given the average precipitation of the Subbasin (12 inches) and depth to groundwater at the Project Site (170.9 to 228 feet), the increase in impervious surface area is not anticipated to substantially reduce groundwater levels. The proposed Project 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, impacts would be less than significant and mitigation is not required.

X(c): 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 manner which would:

(i) Result in substantial erosion or siltation on- or off-site.

The Project Site consists of a construction site that consists of approximately 3.6 acres of impervious surface area (28 percent cover). Site drainage currently discharges to the streets or existing stormwater drainage systems.

Because the Project Site would be graded and impervious surfaces would be added due to the addition of hardscaping, sports courts, buildings, playgrounds, and other public amenities, the proposed Project would result in changes to the drainage pattern of the Project Site. However, the *Conceptual Low Impact Development Report*, created to conform to the City's LID Manual/Ordinance regarding the installation of post-construction BMPs, includes post-construction stormwater management measures that would be installed during the construction phase to remove pollutants of concern identified in the City's LID Manual from runoff generated during operation of the proposed Project (Tetra Tech, 2018b).

The following structure source control BMPs, based on the City's LID handbook, would be implemented during construction and/or operation of the proposed Project, as applicable (Tetra Tech, 2018b):

- **BMP-HYDRO-3: Storm Drain Message and Signage.** Existing and proposed storm drain catch basins within the vicinity of the Project Site shall be marked and maintained.
- **BMP-HYDRO-4: Outdoor Material Storage Area Design.** Proposed outdoor storage areas shall be organized and maintained to prevent stored materials from being permitted to runoff with stormwater. The outdoor storage of toxic and hazardous materials is not permitted.

- **BMP-HYDRO-5: Outdoor Trash Storage Area Design.** Proposed outdoor trash storage enclosures shall be organized and maintained to prevent the transportation of trash and debris in stormwater. Bins and dumpsters shall remain covered.
- **BMP-HYDRO-6: Employee Training.** Operations and maintenance employees shall be trained and made aware of the source controls, LID BMPs, educational materials, and maintenance requirements for the proposed Project at first hire and yearly thereafter.
- **BMP-HYDRO-7: Common Area Landscape Management.** A landscape maintenance program shall be established in order to optimize water efficiency, limit pollutant introduction from fertilizers and pesticides, manage landscape waste, and prevent soil erosion.
- **BMP-HYDRO-8: Common Area Litter Control.** A waste management program shall be implemented to inspect the Project Site for litter and pick up any litter as necessary on a regular basis.
- **BMP-HYDRO-9: Common Area Catch Basin Inspection.** Catch basins shall be inspected and maintained, at a minimum, yearly and prior to the rainy season.
- **BMP-HYDRO-10: Street Sweeping Parking Lots.** The angled parking spaces along Anderson Street shall be vacuum swept, at a minimum, yearly and prior to the rainy season..
- **BMP-HYDRO-11: BMP Maintenance.** Proposed structural source controls, non-structural source controls, and LID BMPs shall be maintained as outlined in the Operations and Maintenance Plan that would be developed for the proposed Project.

Runoff from the Project Site and tributary Viaduct areas would be captured by proposed stormwater drainage systems, routed to a variety of structural and LID BMPs (e.g., proprietary vaults with media-filled cartridges, catch basin filter inserts, incidental infiltration during sheet flow and within localized vegetated basins, and below-grade capture and use systems), and discharged to the existing stormwater drainage facilities adjacent to the site. In addition, the Project Site would include a combination of paved surfaces and landscaped areas to provide soil stability and further minimize erosion. With incorporation of these stormwater management measures, the proposed Project is not expected to result in substantial erosion or siltation onsite or offsite. Therefore, impacts would be less than significant and no mitigation is required.

(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite.

The proposed Project would increase the impervious surface area of the Project Site by approximately 1.4 acres, which could reduce groundwater recharge and increase the amount of stormwater runoff over the proposed Project Site.

Table 3.9-9 describes the existing and post-Project peak flow rates of the drainage area that encompasses the proposed Project Site and adjacent street areas. The drainage area extends beyond the boundaries of the proposed 12.6-acre Project Site because it includes the total land area where precipitation collects and drains into a common outlet. Although the Viaduct is still under construction, the drainage area for the Viaduct was included in the calculation of the total peak flow rates because the Viaduct would be constructed over, and drain into, portions of the proposed park areas. Therefore, the drainage area of the proposed park areas is linked with the drainage area of the Viaduct. As shown in

Table 3.9-9, the impervious surface percentage of the drainage area would increase from 42 percent to 74 percent, resulting in an increase in peak flow rates for the 2-Year, 5-Year, 10-Year, 25-Year and 50-Year 24-Hour Design Storm Events. Therefore, the proposed Project has the potential to increase runoff that would increase flooding onsite or offsite.

Table 3.9-9: 24-Hour Design Storm Event Results

Drainage Subarea	Drainage Area (Acres)	Drainage Impervious Surface Area (Acres)	Percent Impervious Surface Area (%)	2-year (cfs)	5-year (cfs)	10-year (cfs)	25-year (cfs)	50-year (cfs)
Existing Conditions								
Total	17.06	7.15	42	8.55	17.76	24.09	32.42	40.45
Post-Project Conditions								
Proposed PARC Areas	6.69	2.21	33	6.7	10.9	13.89	17.6	20.54
Viaduct Areas above the Proposed PARC	6.93	6.93	100	7.03	12	15.53	19.28	21.97
Adjacent Street Areas	5.33	4.89	92	4.21	7.34	9.76	12.95	15.17
Total	18.95	14.02	74	17.94	30.24	39.18	49.83	57.68

cfs = cubic feet per second
Source: (Los Angeles County Department of Public Works, 2006)

However, the proposed Project would include the installation of storm drainage systems to convey runoff to the existing main line systems. The existing systems had sufficient capacity to convey runoff from the Project Site, when it was fully developed, with nearly 100 percent impervious surface cover (prior to the construction of the Viaduct Replacement Project). Therefore, the existing stormwater drainage systems would accommodate runoff from the proposed Project Site, which would be more pervious than the pre-Viaduct demolition conditions. As such, impacts would be less than significant, and no mitigation is required.

Although the proposed Project would not provide public access to the LA River channel, the public would be able to enter the LA River Access Tunnel, which would be subject to inundation. Therefore, the proposed Project could cause flooding during the projected 50-year developed storm event that would have the potential to harm people. Safety measures would be added to the LA River Access Tunnel entry point within the Arts Plaza to deter the public from entering the tunnel during a storm event (e.g., vehicular deterrents such as bollards and safety warning devices). In addition, the City would develop a public safety plan to reduce the potential for flooding to cause harm to the public (**MM-HYDRO-1**). The public safety plan would include protocols for protecting pedestrians and potential homeless populations in the LA River Access Tunnel during flood conditions. With implementation of **MM-HYDRO-1**, the proposed Project would not cause flooding during the projected 50-year developed storm event,

which would have the potential to harm people or damage property or sensitive biological resources. Therefore, impacts would be less than significant, and no mitigation is required.

(iii) 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.

As discussed under **X(c)(ii)** above, the proposed Project would increase impervious surface area, which could increase the amount of surface runoff. Prior to beginning construction of the Viaduct, this area was nearly 100 percent impervious and was served by the existing mainline storm drain system. The proposed stormwater drainage systems would be designed to accommodate stormwater runoff from the Project Site and runoff would not exceed the capacity of the existing and planned stormwater drainage systems.

The proposed Project includes the construction of stormwater drainage systems to capture and route runoff from the Project Site and tributary Viaduct areas to structural or LID BMPs, before being discharged to the existing stormwater drainage facilities adjacent to the site. Runoff from the Project Site would be treated through the use of various capture and use/release BMPs. For the tributary runoff that discharges through the Viaduct bents to the proposed West Park and East Park, structural BMPs (i.e., proprietary vaults with media-filled cartridges) would be installed to treat the runoff for pollutants of concern identified in the City's LID Manual, including sediments, oil and grease, metals, organic materials, and nutrients. Runoff from larger storm events would be bypassed through the internal bypass of each BMP. Due to their locations and depths, it would not be feasible to install additional BMPs at the Viaduct bents draining to the Arts Plaza and directly to the LA River. Rather, these portions of the park would rely on catch basin filter inserts installed as part of the Viaduct Replacement Project to treat the runoff.

The remaining localized rainfall falling on the portion of the Project Site outside of the Viaduct's footprint would be treated through a combination of incidental infiltration during sheet flow along pervious land areas, incidental infiltration within localized vegetated basins, and below-grade capture and use systems below some of the proposed lawn areas in areas with a larger impervious area footprint. The below grade capture and use systems would provide supplemental irrigation for these lawn areas. The incidental infiltration or capture and use of the stormwater would remove pollutants of concern. Larger storm events would be captured and conveyed through proposed local storm drainage systems to new connections to the existing storm drainage system.

The proposed Arts Plaza is underlain with contaminated soil and groundwater from the Metro 20 site. The site is currently undergoing remediation under a Voluntary Cleanup Agreement between Metro, U.S. EPA, and DTSC. Proposed construction activities would include grading of the entire Project Site and excavation to remove hazardous soils. The handling, storage, and disposal of contaminants would comply with all applicable federal, state, and local requirements. The Project Site would be remediated to standards acceptable by LACoFD and other agencies as required, thereby reducing the area affected by contaminants. Therefore, proposed construction activities would not worsen the existing contamination. The City would coordinate with Metro, U.S. EPA, LACoFD, and DTSC during construction activities. Any non-stormwater discharge would be controlled and properly disposed of through the sanitary sewer system or transported to an approved processing facility to prevent the further contamination of site soils and groundwater.

With implementation of the BMPs described above, the proposed Project would not contribute runoff water that would exceed the capacity of existing stormwater drainage systems or provide substantial additional sources of polluted runoff. Therefore, impacts would be less than significant, and no mitigation is required.

(iv): Impede or redirect floodflows.

As described in Section 3.9.2.6, the Project Area includes the LA River, which is a major floodway, with flood flows that are confined within the levees. Phase I of construction would not place structures within a 100-year flood hazard area. However, Phase II of construction would construct reinforced concrete planted terraces on the west and east banks of the LA River channel. Although the structures would be located as high as possible on the LA River banks, the structures could reduce the overall capacity of the LA River and impede or redirect flood flows during high flows.

The former Viaduct included a 22.33-foot by 71-foot pier located in the middle of the floodway, which obstructed flows in the LA River. Demolition of the Viaduct, which occurred in 2016, resulted in improvements to the hydraulic performance of the LA River. As indicated in the 2-Dimensional Hydraulic Study of the LA River prepared for the Viaduct Replacement Project, the bridge and river modifications were projected to reduce the water surface elevation of the LA River by about 13.8 feet (HNTB Corporation, 2015). The new Viaduct, which is anticipated to be complete in 2020, would not obstruct flows in the LA River because the support columns would be located on either side of the LA River channel outside of the high water surface elevation.

The proposed Project would not introduce structures that would raise the water surface elevation to levels greater than 13.8 feet (i.e., pre-Viaduct demolition conditions). Any impacts to the hydraulic performance of the LA River through the construction of reinforced concrete planted terraces are anticipated to be significantly offset by the Viaduct Replacement Project. Therefore, when considered cumulatively with the Viaduct Replacement Project, the proposed reinforced concrete planted terraces terracing and concrete planters are not anticipated to impact flooding within the LA River (see Section 3.9.7 for additional discussion on cumulative impacts). Impacts would be less than significant and no mitigation is required.

Additionally, the proposed Project may require the use of hazardous materials during operation, such as paint for the sports field(s), pesticides and fertilizers for the landscaping, and other materials used for maintenance of the facilities. The handling, storage, and disposal of hazardous materials would comply with all applicable federal, state, and local requirements to reduce the potential for the release of contaminants into groundwater.

The proposed Project includes the construction of capture and use/release BMPs to treat runoff from the Project Site. Structural BMPs (i.e., proprietary vaults with media-filled cartridges) would be installed to treat runoff for pollutants of concern identified in the City's LID Manual, including sediments, oil and grease, metals, organic materials, and nutrients. Runoff would also be treated through lined vegetated biofiltration basins and below-grade capture and use systems, where the runoff would be filtered through the vegetation and soil media to remove pollutants of concern before discharging through a perforated underdrain. These BMPs would prevent the percolation of contaminants into groundwater. Therefore, the proposed Project would not result in an increased level of groundwater contamination.

The proposed Project would result in a net increase in the impervious surface area of the Project Site of 1.4 acres, which represents 11 percent of the 12.6-acre project site and .001 percent of the 177,000-acre Sub basin. The net addition of 1.4 acres of pavement would result in a relatively small addition of impervious surfaces to an area that is already highly developed; therefore, the proposed Project would not substantially affect groundwater recharge. In addition, as discussed under Section 3.9.3.4, the proposed Project would not substantially alter the existing drainage pattern of the proposed Project Site. Therefore, the proposed Project would not substantially affect the rate or change the direction of movement of existing contaminants.

X(e): Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Operation of the proposed Project would be subject to the provisions of the CWA and Porter-Cologne Act; NPDES permitting requirements and the City's LID Ordinance; and other federal, state, and local requirements to ensure that stormwater pollutants resulting from operation would not substantially degrade water quality. In addition, the proposed Project would implement structural and LID BMPs to prevent, control, and reduce stormwater pollutants. Therefore, the proposed Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Impacts would not be significant, and no mitigation is required.

3.9.4 Best Management Practices

The following structure source control BMPs, based on the City's LID handbook, would be implemented during construction and/or operation of the proposed Project, as applicable:

BMP-HYDRO-1: Construction Drainage Design

The proposed Project shall incorporate drainage designs that direct stormwater runoff or irrigation runoff away from structures or the top of the slopes. No stormwater will be allowed to discharge over the top of a cut or fill slope.

BMP-HYDRO-2: Off-Site Sediment Transport

All entrances and exits to the construction site shall be stabilized to reduce transport of sediment off-site. Any sediment or other materials tracked off-site shall be removed within a reasonable time.

BMP-HYDRO-3: Storm Drain Message and Signage

Existing and proposed storm drain catch basins within the vicinity of the Project Site shall be marked and maintained.

BMP-HYDRO-4: Outdoor Material Storage Area Design

Proposed outdoor storage areas shall be organized and maintained to prevent stored materials from being permitted to runoff with stormwater. The outdoor storage of toxic and hazardous materials is not permitted.

BMP-HYDRO-5: Outdoor Trash Storage Area Design

Proposed outdoor trash storage enclosures shall be organized and maintained to prevent the transportation of trash and debris in stormwater. Bins and dumpsters shall remain covered.

BMP-HYDRO-6: Employee Training

Operations and maintenance employees shall be trained and made aware of the source controls, LID BMPs, educational materials, and maintenance requirements for the proposed Project at first hire and yearly thereafter.

BMP-HYDRO-7: Common Area Landscape Management

A landscape maintenance program shall be established in order to optimize water efficiency, limit pollutant introduction from fertilizers and pesticides, manage landscape waste, and prevent soil erosion.

BMP-HYDRO-8: Common Area Litter Control

A waste management program shall be implemented to inspect the Project Site for litter and pick up any litter as necessary on a regular basis.

BMP-HYDRO-9: Common Area Catch Basin Inspection

Catch basins shall be inspected and maintained, at a minimum, yearly and prior to the rainy season.

BMP-HYDRO-10: Street Sweeping Parking Lots

The parking plaza shall be vacuum swept, at a minimum, yearly and prior to the rainy season.

BMP-HYDRO-11: BMP Maintenance

Proposed structural source controls, non-structural source controls, and LID BMPs shall be maintained as outlined in the Operations and Maintenance Plan that will be developed for the proposed Project.

BMP-HYDRO-12: Structural and LID BMPs

- Runoff from the Project Site and tributary Viaduct areas shall be captured by proposed stormwater drainage systems, routed to a variety of structural and LID BMPs and discharged to the existing stormwater drainage facilities adjacent to the site. In addition, the Project Site shall include a combination of paved surfaces and landscaped areas to provide soil stability and further minimize erosion.
- The remaining localized rainfall falling on the portion of the Project Site outside of the Viaduct's footprint shall be treated through a combination of incidental infiltration during sheet flow along pervious land areas, incidental infiltration within localized vegetated basins, and below-grade capture and use systems below some of the proposed lawn areas in areas with a larger impervious area footprint. The incidental infiltration or capture and use of the stormwater will remove pollutants of concern. Larger storm events will be captured and conveyed through proposed local storm drainage systems to new connections to the existing storm drainage system.
- Structural BMPs (i.e., proprietary vaults with media-filled cartridges) shall be installed to treat runoff for pollutants of concern identified in the City's LID Manual, including sediments, oil and grease, metals, organic materials, and nutrients. Runoff shall also be treated through lined vegetated biofiltration basins and below-grade capture and use systems, where the runoff will be filtered through the vegetation and soil media to remove pollutants of concern before discharging through a perforated underdrain.

BMP-HYDRO-13: Regulatory Requirements for Water Quality

- To comply with the provisions of the NPDES MS4 Permit, the proposed Project shall implement a SWPPP that includes construction site BMPs to control erosion and sedimentation. BMPs include silt fencing, fiber rolls, sandbag barriers, drainage inlet protections, and berms at the top of all grade slopes. The SWPPP shall also include post-construction stormwater management measures to control pollutants in stormwater discharges during operation of the proposed Project.
- If groundwater is encountered, the contractor shall develop a dewatering plan, and a Dewatering Permit with the Los Angeles RWQCB will also be required. Should dewatering be required, the proposed Project shall comply with the General Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties.
- Proposed construction activities shall comply with all applicable federal, state, and local requirements to reduce the potential for the release of hazardous waste and other contaminants into groundwater. In addition, construction activities will be subject to the provisions of the CWA and Porter-Cologne Act; and other federal, state, and local requirements to ensure that stormwater pollutants resulting from construction will not substantially degrade water quality.
- A water diversion plan is not anticipated for the proposed Project because Phase II construction activities shall be performed during the dry season (April 15 through October 15). However, if work in a flowing stream is unavoidable, a water diversion plan shall be required, and the entire stream flow shall be diverted around the work area by a barrier, temporary culvert, new channel, or other means approved by the CDFW. Should water diversion be necessary, a 401/404 permit will also be required.
- An emergency evacuation plan shall be prepared for Phase II construction within the LA River. If measurable rain with 25 percent or greater probability is predicted within 72 hours during project-related activities, all activities within the LA River shall cease and protective measures to prevent siltation/erosion shall be implemented/maintained. With the implementation of BMPs, alterations to drainage patterns during construction in the LA River channel will not result in substantial erosion or siltation onsite or offsite.
- A Notice of Intent (NOI) for stormwater discharges associated with construction activities may also be required under the NPDES General Permit.
- Stormwater BMPs shall follow the latest California Stormwater Quality Association's Stormwater Best Management Practices Handbook. All entrances and exits to a construction site will be stabilized to reduce transport of sediment off-site. Any sediment or other materials tracked off-site will be removed within a reasonable time.
- Any non-stormwater discharge shall be controlled and properly disposed of through the sanitary sewer system or transported to an approved processing facility to prevent the contamination of site soils and groundwater.

- The handling, storage, and disposal of contaminants shall comply with all applicable federal, state, and local requirements. The Project Site shall be remediated to standards acceptable to LACoFD and other regulatory agencies as required, thereby reducing the area affected by contaminants.

3.9.5 Mitigation Measures

MM-HYDRO-1: Public Safety Plan

Prior to Final Plan approval, the City, in coordination with USACE, shall publish a Public Safety Plan in order to reduce the potential for safety impacts related to flooding. The Public Safety Plan shall include an evacuation plan and protocols for protecting pedestrians and potential homeless populations (e.g., vehicular deterrents such as bollards and safety warning devices) in the LA River Access Tunnel during flood conditions.

3.9.6 Significant Unavoidable Adverse Impacts

There are no significant unavoidable adverse impacts on Hydrology and Water Quality resulting from the construction and operation of the proposed Project.

3.9.7 Cumulative Impacts

The study area for cumulative impacts related to Hydrology and Water Quality is the Los Angeles River watershed. The proposed Project would comply with all required laws, permits, ordinances, and plans, including the MS4 Permit and Construction General Permit requirements, thereby reducing incremental effects to Hydrology and Water Quality. The proposed Project would increase impervious surfaces in the Project Area, which is expected to increase surface runoff and pollutant loads in the receiving watershed.

Prior to the construction of the Viaduct Replacement Project, the Project Site consisted of commercial and industrial properties, with impervious surface area totaling nearly 100 percent. Over the course of the Viaduct construction, the impervious surface area decreased to approximately 3.6 acres (28 percent). As shown in **Table 3.9-8**, the cumulative impervious surface area (including the Viaduct and the proposed Project) would be approximately 8.9 acres (71 percent). Therefore, cumulatively, when combined with the Viaduct Replacement Project, there would be a net decrease in impervious surface area at the Project Site (100 percent to 71 percent), which would result in beneficial impacts on hydrology and water quality such as increasing the area for groundwater recharge and reducing the amount of runoff.

Phase II of the proposed Project includes terracing of the west and east banks of the LA River. Because of the removal of the existing Sixth Street Viaduct as part of the Viaduct Replacement Project, the proposed terracing is not anticipated to impact flooding within the LA River. Any impacts to the hydraulic performance of the LA River through the construction of the terracing are anticipated to be significantly offset by the hydraulic improvements of removing the center pier of the existing Sixth Street Viaduct as part of the Viaduct Replacement Project (Tetra Tech, 2018a). Therefore, when considered cumulatively with the Viaduct Replacement Project, the need for flood control measures would not be necessary.

The areas surrounding the Project Area are heavily urbanized and covered in impervious surfaces. The projects included in **Table 1-1** include primarily infrastructure improvement and in-fill development projects. These projects would occur within already developed areas and would not significantly

contribute to increased runoff as a result of increases in impervious surfaces. Future development projects would comply with all required laws, permits, ordinances, and plans. In addition, projects would be evaluated based on implementation of minimum construction BMPs and LID design principles. In doing so, impacts related to Hydrology and Water Quality, such as flooding, groundwater contamination, and changes to drainage patterns, would be minimized to ensure that the incremental effects of individual projects would not result in substantial cumulative impacts. Therefore, the proposed Project would not result in cumulatively considerable impacts related to Hydrology and Water Quality.

3.10 Land Use and Planning

This section describes the consistency of the Project with adopted land use and planning related regulations applicable to the Project Site and surrounding area. In addition, this section evaluates the potential for the Project to result in environmental impacts related to land uses. As noted in the analysis below, environmental impacts associated with land uses, including impacts during the construction or operation of the proposed Project would be less than significant with the incorporation of mitigation measures.

The information in this section is based on the *Community Impact Assessment* (CIA) prepared for the proposed Project (GPA Consulting, 2019).

3.10.1 Regulatory Setting

A review of the various federal, state, regional, and local government regulatory requirements was conducted to identify regulations that relate to Land Use and Planning. This section summarizes the various regulatory requirements that are relevant to the proposed Project. Relevant goals, policies, and standards are further described in Section 3.10.2.2**.**

3.10.1.1 Local

City of Los Angeles General Plan

As required by the State of California, the City's General Plan addresses goals, policies, and standards related to land use, circulation, housing, conservation, open space, noise, and safety (City of Los Angeles, 2017). To address goals that meet the unique needs of the City, the General Plan also includes elements related to health and wellness, air quality, conservation, and public facilities and services. The City is currently undertaking a comprehensive update to the General Plan.

Framework Element

The General Plan Framework Element is a strategy for long-term growth that guides updates to the community plan and citywide elements, as required by California State law (Government Code Section 65300) (City of Los Angeles, 1996). The Framework Element responds to state and federal mandates to plan for the future by providing goals, policies, and objectives on a variety of topics, such as land use, housing, urban form, open space, transportation, and infrastructure and public services. The Framework Element features several implementation programs, which include amendments to community plans and the zoning ordinance, and the establishment of development standards.

Land Use Element

The Land Use element of the City's General Plan includes Community Plans for 35 community plan areas (along with LAX and Port Plans), within Los Angeles to provide specific neighborhood-level detail, and provide relevant policies and implementation strategies necessary to achieve the General Plan objectives. Community Plans guide the future development in neighborhoods by establishing goals and policies for land use. General land use maps were developed for Boyle Heights and Central City North Community Plan areas where the Project Area is located. The Community Plans for Boyle Heights and Central City North are currently undergoing updates.

Boyle Heights Community Plan

The Boyle Heights Community Plan is part of the City of Los Angeles General Plan and discusses the major planning land use issues and opportunities facing the community. The Boyle Heights Community Plan also establishes a framework for development in accordance with the community's land use policies and programs (City of Los Angeles, 1998). The portion of the Project Area east of the LA River is located in the Boyle Heights community. The Boyle Heights Community Plan is currently being updated, with a draft released in October 2017.

Central City North Community Plan

The Central City North Community Plan is one of the plan areas that comprise the City's Land Use Element and includes land use policies and implementation programs for the community (City of Los Angeles, 2000). The portion of the Project Area west of the LA River is located in the Central City North community.

The City is currently updating the Downtown Community Plan, also known as DTLA 2040 Plan, which includes both the Central City North and Central City Community plan areas (City of Los Angeles, 2019a). The proposed DTLA 2040 Plan intends to address Downtown Los Angeles' growth in population, housing, and employment. An emphasis on transit and new zoning tools are central to the proposed DTLA 2040 Plan.

Open Space Element

The Open Space Element of the City's General Plan provides information to guide decision makers and interested citizens regarding the identification, preservation, conservation, and acquisition of open space in the City (City of Los Angeles, 1973). The Element aims to ensure that the City has sufficient open space to meet its recreational, environmental, health, and safety needs. In addition, the Element aims to conserve and preserve the City's environmental resources, as well as provide open spaces that contribute to the City's identity.

Service Systems Element/Public Recreation Plan

The Public Recreation Plan includes policies and programs that emphasize neighborhood and community facilities, including recreational sites and parks (City of Los Angeles, n.d.). The Plan's objectives include developing standards for the City's public recreational facilities, with the goal of meeting the City's recreational needs and benefiting the greatest number of people, while minimizing costs and environmental impacts.

City of Los Angeles Municipal Code

The City's Municipal Code provides the regulatory framework and ordinances of the City (City of Los Angeles, 2019c). The Municipal Code assists City offices, departments, and other governmental agencies in carrying out their functions, and provides citizens with information regarding the City's regulations. Chapter I of the Municipal Code governs planning, zoning, land regulations, development projects, and other topics pertaining to land use. Chapter I includes definitions and standards for different land uses, and identifies the land uses that are allowed in various zoning districts.

City of Los Angeles River Improvement Overlay District

Effective August 20, 2014, Section 13.17 of the City's Municipal Code provides standards for the establishment of the River Improvement Overlay (RIO) District. The RIO District is a special use district that extends approximately 0.5 miles from the Los Angeles River (LA River) through the communities of Boyle Heights, Arts District, Lincoln Heights, and Chinatown East (City of Los Angeles, 2007b). The RIO District is intended to help the City coordinate land use development along the 32-mile corridor of the LA River within the City's boundaries. Within the RIO District, new projects must conform to the development regulations outlined in the Municipal Code, including landscaping, screening/fencing, lighting, and river access requirements.

re:code LA

The City's existing Zoning Code was adopted in 1946. Re:code LA is a new zoning code for the City that is being developed through the re:code LA effort (City of Los Angeles, 2014). The Department of City Planning initiated re:code LA in 2012 to address the City's current and future transportation, employment, and housing demands based on changes in population size and demographics. The new zoning code is being implemented through community plan updates and it does not apply to the entire city at once.

L.A.'s Green New Deal (Sustainable City pLAn)

The City developed a Sustainable City pLAn (Plan) in 2015 and an updated annual report, titled L.A.'s Green New Deal, was released in 2019 (Office of the Los Angeles Mayor, 2019). The plan consists of 47 targets with milestones and initiatives for a cleaner environment and a stronger economy. The plan includes a vision for expanding tree canopy, providing greater access to parks open space, restoring the LA River, and protecting biodiversity and natural areas. To help meet this vision, the plan established a target of ensuring the proportion of Angelenos living within 0.5 miles of a park or open space is at least 65 percent by 2025, 75 percent by 2035, and 100 percent by 2050. In addition, the plan includes a target for creating 32 miles of bike paths and trails to increase public access to the LA River by 2028.

Los Angeles River Revitalization Master Plan

The Los Angeles River Revitalization Master Plan includes plans to construct a continuous river greenway, providing habitat restoration, open spaces, and pedestrian and bicycle paths along the LA River (City of Los Angeles, 2007a). The Plan includes a 32-mile long and 1-mile-wide planning area, with goals that include, but are not limited to, establishing guidelines for land use and development around the LA River; enhancing and improving communities adjacent to the river; improving public access to the river; and providing recreation and open space.

LA River Design Guidebook

The LA River Design Guidebook provides design recommendations that complement the Los Angeles River Revitalization Master Plan and the design guidelines associated with the RIO Overlay (City of Los Angeles, 2016). The Guidebook is intended for use by the communities of Boyle Heights, Arts District, Lincoln Heights, and Chinatown East, and incorporates the input of residents, stakeholders, and representatives from these communities.

Los Angeles County: LA River Master Plan

The *Los Angeles County LA River Master Plan* was originally published in 1996 to provide for the optimization and enhancement of aesthetic, recreational, flood control, and environmental values by creating a community resource, enriching the quality of life for residents and recognizing the river's primary purpose for flood control (Los Angeles County Department of Public Works, 1996). The plan encompasses all 51-miles of the river, in addition to the Tujunga Wash, which is 9 miles long. The river touches 13 cities and 9 Los Angeles City Council Districts, all of which are addressed in the Master Plan document. The LA River Master Plan goals aim to:

- Ensure flood control and public safety needs are met.
- Improve the appearance of the river and the pride of local communities in it.
- Promote the river as an economic asset to the surrounding communities.
- Preserve, enhance, and restore environmental resources in and along the river.
- Consider stormwater management alternatives.
- Ensure public involvement and coordinate Master Plan development and implementation among jurisdictions.
- Provide a safe environment and a variety of recreational opportunities along the river.
- Ensure safe access to and compatibility between the river and other activity centers.

The LA River Master Plan is currently undergoing a comprehensive update that covers all 51 miles of the river.

3.10.2 Environmental Setting

The Project Area is in the community plan areas of Central City North, located in the eastern portion of Downtown Los Angeles, and Boyle Heights, located immediately east of Downtown Los Angeles (see **Figure 3.10-1**, Community Plan Areas). The LA River forms a natural separation between these two communities. The two communities are also divided by several railroad corridors that run parallel to the LA River along the east and west banks. Existing fencing surrounds the railroad tracks to prevent trespassing onto railroad right-of-way.

Transportation infrastructure in the Project Area includes railroad tracks, United States 101 (U.S. 101), Interstate 5 (I-5), and Interstate 10 (I-10). The Project Area is bordered by Fourth Street to the north and Seventh Street to the south and is bisected by Sixth Street. The other major streets in the Project Area include Mateo Street, Santa Fe Avenue, Mission Road, Anderson Street, and Clarence Street.

Central City North Community Plan Area

The Central City North Community Plan area is bounded by Stadium Way, Lilac Terrace, and North Broadway in the north; the LA River to the east; the City of Vernon to the south; and Alameda Street, Cesar Chavez Avenue, Sunset Boulevard, and Marview Avenue to the west (City of Los Angeles, 2000). Located west of the LA River, the Central City North Community Plan area spans approximately three square miles and is a major industrial district (City of Los Angeles, 2000). Central City North includes

Chinatown, parts of Little Tokyo, and parts of the original Mexican pueblo. The Arts District, formerly an industrial area that was transformed into an artist community in the mid-1970s, is also located within the Central City North Community Plan. The community was traditionally a center of commercial and transit activity but has recently seen an increase in residential units through the conversion of industrial buildings to artists-in-residence and studios.

Boyle Heights Community Plan Area

The Boyle Heights Community Plan Area is bounded by Lincoln Heights and El Sereno to the north, the unincorporated community of East Los Angeles to the east, the City of Vernon to the south, and the LA River to the west (City of Los Angeles, 1998). Located east of the LA River, the Boyle Heights Community Plan area spans approximately six square miles and contains a mix of residential, commercial, industrial, open space, and public facility land uses (City of Los Angeles, 1998). The Boyle Heights Community Plan area includes four major freeways (i.e., I-5, I-10, U.S. 101, and State Route 60 [SR 60]), resulting in segmentation of the community. As one of the first suburbs of Los Angeles, the community includes old infrastructure and residences, as well as some more recent development.

Figure 3.10-1: Community Plan Areas

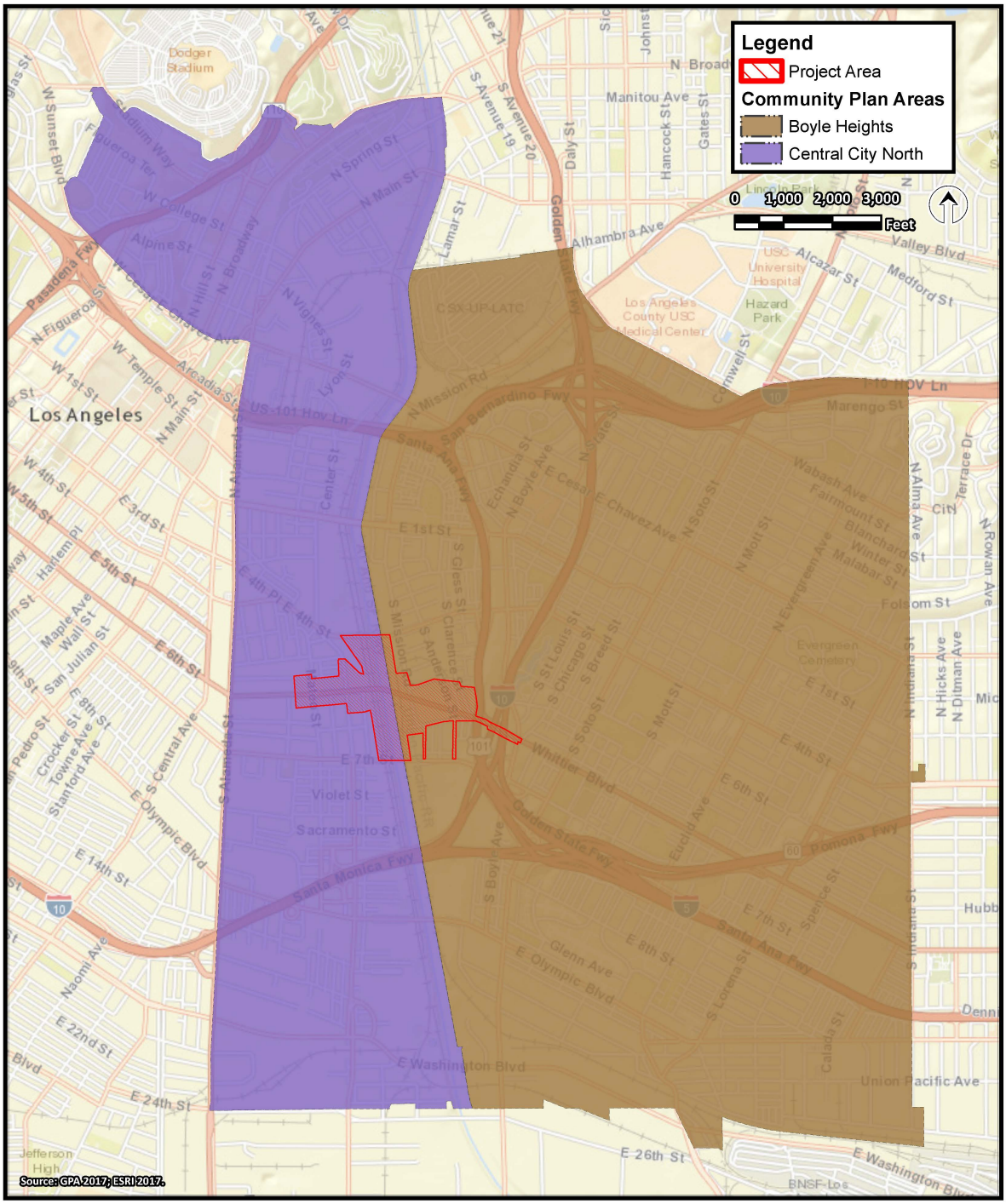

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FIGURE 3.10-1: COMMUNITY PLAN AREAS
Sixth Street PARC Project

3.10.2.1 General Plan Zoning and Land Use Designations

The Project Area includes the following land use designations: Limited Industrial (zoned M1), Light Industrial (zoned M2), Heavy Industrial (zoned M3), Open Space (zoned OS) within the LA River channel, and Public Facilities (zoned PF) (see **Figure 3.10-2**, Land Use and **Figure 3.10-3**, Zoning). Zoning regulations for the Project Area are summarized in **Table 3.10-1**. Boyle Heights and Central City North Community Plans are currently undergoing updates.

The entire Project Area west of U.S. 101 is within the RIO District. In 2014, the City's zoning map was amended to include the RIO District, which includes neighborhoods that are adjacent to the LA River within the City (City of Los Angeles, 2007b). The RIO District was implemented to aid in the revitalization of the LA River. All new developments within the RIO District must comply with the prevailing zoning and building codes, in addition to the design guidelines established in the RIO.

Table 3.10-1: Summary of Land Uses within the Project Area

Zone	Use
Manufacturing	
M1	Limited Industrial Restricted Industrial Uses (MR1), Limited Industrial and Manufacturing Uses, no Residential (R) Zone Uses, no hospitals, schools, or churches, any Enclosed Commercial (C2) Use, Wireless Telecommunications, and Household Storage.
M2	Light Industrial M1 and Restricted Light Industrial (MR2) Uses, Additional Industrial Uses, Storage Yards, Animal Keeping, Enclosed Composting, and no R Zone Uses.
M3	Heavy Industrial Restricted Light Industrial (MR2) Uses, any Industrial I Uses, Nuisance Type Uses that are 500 feet from any other zone, and no R Zone Uses.
Other	
PF	Public Facilities Agricultural Uses, Parking Under Freeways, Fire and Police Stations, Government Buildings, Public Libraries, Post Offices, Public Health Facilities, Public Elementary and Secondary Schools, and Qualified Permanent Supportive Housing Projects.
OS	Open Space Parks and Recreation Facilities, Nature Reserves, Closed Sanitary Landfill Sites, Public Water Supply Reservoirs, and Conservation Areas.
Overlay District	
RIO	Provides design guidelines in addition to the underlying zoning regulations.

Source: (City of Los Angeles, 2019b)

Figure 3.10-2: Land Use

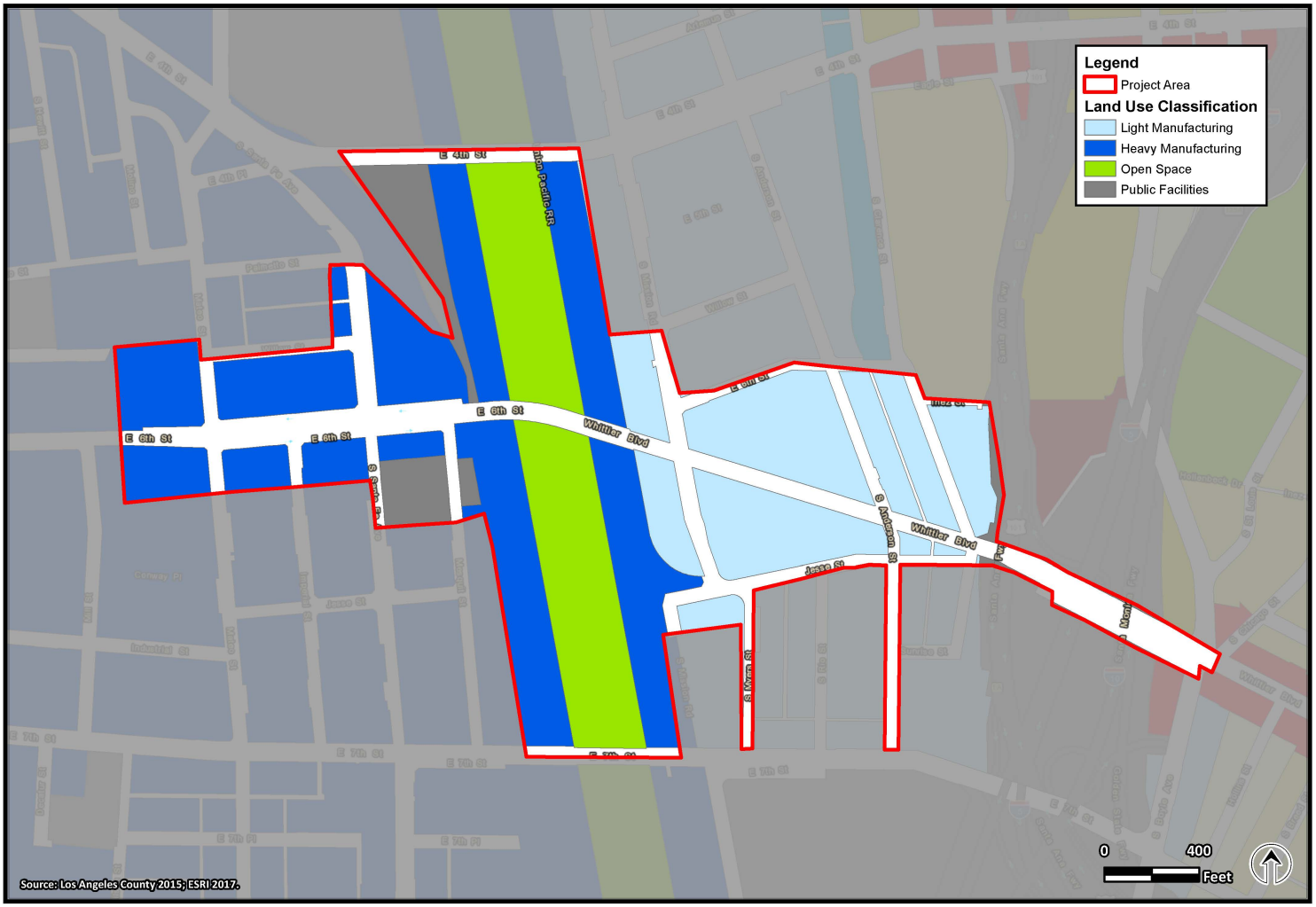

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FIGURE 3.10-2: LAND USE
Sixth Street PARC Project

Figure 3.10-3: Zoning

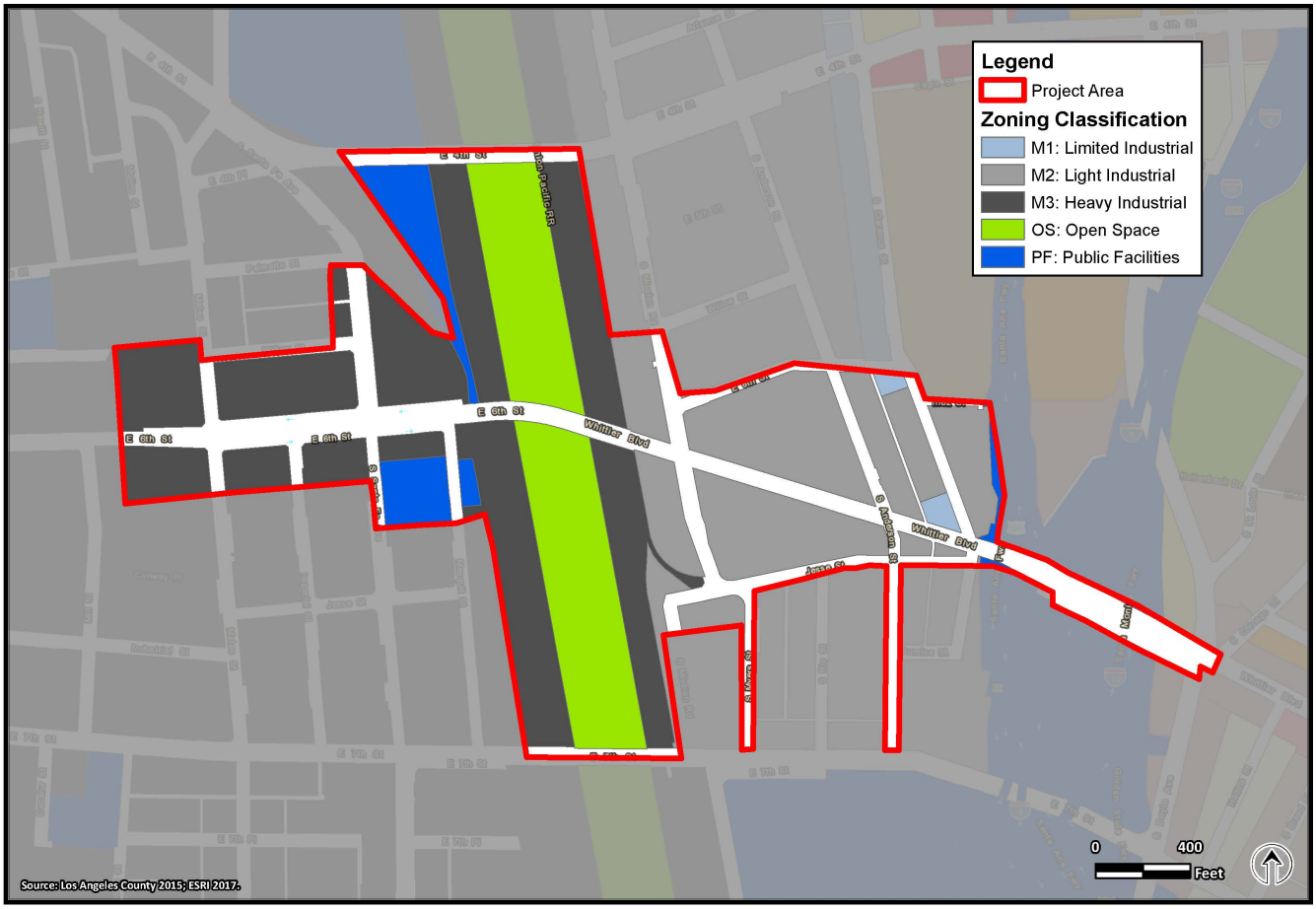

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FIGURE 3.10-3: ZONING
Sixth Street PARC Project

3.10.2.2 Applicable Goals, Objectives, and Policies

The applicable land use plans are described in Section 3.10.1, and applicable land use goals, objectives, and policies associated with the proposed Project are included in **Table 3.10-2**. In addition, according to Case No. ZA 2015-2348 Zoning Administrator's Interpretation (ZAI) – Lists of Uses Permitted in Various Zones, which is a summary of the zoning code, the following zones permit "Park or Playground (Open outdoor space), operated by government agency": OS, A1, A2, RA, RE, RS, R1, RU, RZ, RD, RMP, R3, RAS3, R4, RASR, R5, CR, C1, C1.5, C2, C4, C5, CM, M1, M2, and M3.

Table 3.10-2: Consistency with Applicable Plans and Goals, Objectives, and Policies

Policy/Goal	Proposed Project
City of Los Angeles General Plan – Land Use Element Central City North Community Plan	

Recreation and Parks Facilities
• *Goal 4:* Adequate recreation and park facilities which meet the needs of the residents in the Plan Area
• *Goal 5:* A community with sufficient open space in balance with development to serve the recreational, environmental, and health needs of the community and to protect environmental and aesthetic resources
  • *Objective 5-1:* To preserve existing open space resources and where possible develop new open space.
  • *Policy 5-1.1:* Encourage the retention of passive and visual open space which provides a balance to the urban development of the Plan Area.
  • *Objective 5-2:* To ensure the accessibility, security and safety of parks by their users, particularly families with children and senior citizens.
  • *Policy 5-2.1:* Ensure that parks are adequately illuminated for safe use at night where appropriate.
	Consistent. The proposed Project would provide additional recreation and park facilities to address deficiencies, as well as serve the recreational, environmental, and health needs of the residents in the Central City North Community Plan area. The proposed Project would provide open space that would provide a balance to the surrounding urban environment, comprised of industrial and commercial developments and freight corridors. The proposed Project would be designed to improve environmental and aesthetic resources. In addition, the proposed Project would be designed to be safe and accessible for all users. The proposed Project would include lighting that meets City standards.

City of Los Angeles General Plan – Land Use Element Boyle Heights Community Plan (1998)	
Recreation and Parks Facilities • Objective 1: To provide adequate recreation and park facilities which meet the needs of the residents in the community	**Consistent.** The proposed Project would provide additional recreation and park facilities to meet the needs of the residents in the Boyle Heights Community Plan area. Recreation and park facilities would include public gathering/assembly areas, flexible play areas, adult fitness equipment, dog play areas, sports fields and courts, children's play areas,

Policy/Goal	Proposed Project
	picnic and grilling areas, skate park elements, and pedestrian and bicycle paths.
City of Los Angeles General Plan – Open Space Element	
General • Open space areas shall be provided or developed to serve the needs as appropriate to their location, size, and intended use of the communities in which they are located, as well as the City and region as a whole. • Small parks, public and private, should be located throughout the City. Not only should recreation activities be provided, but an emphasis shall be placed on greenery and openness.	**Consistent.** The proposed Project would be designed to serve the needs of the surrounding Central City North and Boyle Heights Community Plan areas, as well as the City and surrounding region. The proposed Project design would incorporate recreational facilities in conjunction with landscaped seating areas, vegetated planters, and open spaces that would add greenery to the City.
City of Los Angeles General Plan – Service Systems Element	
Recreational use should be considered for available open space and unused or underused land, particularly publicly owned lands having potential for multiple uses.	**Consistent.** The proposed Project would convert public, underused land within and adjacent to a transportation corridor into an open space with park facilities and recreational uses.
City of Los Angeles General Plan – Mobility Plan 2035 (Circulation Element)	
Safety • *Policy 1.2*: Implement a balanced transportation system on all street, tunnels, and bridges using complete streets principles to ensure the safety and mobility of all used. **Infrastructure** • *Policy 2.1:* Design, plan, and operate streets to serve multiple purposes and provide flexibility in design and adapt to future demands. • *Policy 2.*3: 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 2.6:* Provide safe, convenient, and comfortable local and regional bicycling facilities for people of all types and abilities. • *Policy 2.12:* Design for pedestrian and bicycle travel when rehabilitating or installing a new bridge, tunnel, or exclusive transit right-of-way. • *Policy 2.15*: Expand funding to improve the built environment for people who walk, bike, take transit, and for other vulnerable roadway users.	**Consistent.** The proposed Project would promote sustainable forms of transportation throughout the Project Area, with the implementation of pedestrian walkways and bicycle paths throughout the park. In addition, the proposed Project would include street improvements to improve pedestrian and bicycle circulation (e.g., the addition of sidewalks and improvements to existing sidewalks, the addition of crosswalks, and the extension of bikeways). The proposed Project would be consistent with other bicycle infrastructure improvement projects in the Project Area, including ATP-1: Sixth Street Viaduct Replacement Project Bicycle and Pedestrian Facilities and ATP-3: Downtown LA Arts District Pedestrian and Cyclist Safety Project.

Policy/Goal	Proposed Project
Access • *Policy 3.1*: Recognize all mode of travel, including pedestrian, bicycle, transit, and vehicular modes as integral components of the City's transportation system. • *Policy 3.2:* Accommodate the needs of people with disabilities when modifying or installing infrastructure in the public right-of-way. **Clean Environments and Healthy Communities** • *Policy 5.1:* Encourage the development of a sustainable transportation system that promotes environmental and public health.	
City of Los Angeles – Complete Streets Design Guide	
• *Goal:* The Complete Streets Design Guide provides a compilation of design concepts and best practices that promote safety, accessibility and convenience for all transportation users as described in California's Complete Streets Act of 2008 (AB 1358); including pedestrians, bicyclists, transit riders, and motorists. By prioritizing people over cars, the streets of Los Angeles can provide lively gathering places that foster community building and neighborhood identity, encourage healthy recreational activities such as walking, running, and bicycling.	**Consistent.** The proposed Project would promote safety, accessibility, and convenience for all visitors, and encourage physical activities with the inclusion of various recreational amenities.
City of Los Angeles – General Plan – Health and Wellness Element	

A City Built for Health
• *Objective:* Increase the number of underutilized spaces (easements, parkways, vacant lots and spaces, vacated railways, and similar) that are repurposed for health-promoting activities in low-income communities.
  • *Policy 2.6:* Work proactively with residents to identify and remove barriers to leverage and repurposed vacant and underutilized spaces as a strategy to improve community health.
  • *Policy 2.9:* Proactively work with residents and public, private, and nonprofit partners to develop, execute, and maintain civic stewardship over community beautification efforts to promote neighborhoods that are clean, healthy, and safe.
  • *Policy 2.11:* Lay the foundation for healthy communities and healthy living by promoting infrastructure improvements that support active
	Consistent. The proposed Project would convert unused public land adjacent to the LA River into an open space with park facilities and recreational uses in order to encourage healthy physical activities and safe communities. The proposed Project also includes safety features to protect the public from hazards associated with surrounding industrial land uses and the LA River. Pedestrian crosswalks would be included at all major roadways intersecting the Project Site (i.e., Santa Fe Avenue, Mission Road, Anderson Street, and Clarence Street). Safety measures would be added to the LA River Access Tunnel entry point within the proposed Arts Plaza to deter the public from entering the tunnel during a storm event (e.g., vehicular deterrents such as bollards and safety warning devices). The City would also develop a public safety plan to address public safety during flood events. The public safety plan

Policy/Goal	Proposed Project

transportation with safe, attractive, and comfortable facilities that meet community needs; prioritize implementation in communities with the greatest infrastructure deficiencies that threaten the health, safety, and well-being of the most vulnerable users.
Bountiful Parks and Open Spaces
• *Objective:* Increase the number of neighborhood and community parks so that every Community Plan Area strives for 3 acres of neighborhood and community park space per 1000 residents (excluding regional parks and open spaces).
• *Objective:* Increase access to parks so that 75% of all residents are within a 1/4 mile walk of a park or open space facility.
• *Objective:* Increase the miles of the Los Angeles River that are revitalized for natural open space and physical activity, particularly in low-income areas.
  • *Policy 3.3:* Support the implementation of the Los Angeles River Revitalization Master Plan to create a continuous greenway of interconnected parks and amenities to extend open space and recreational opportunities.
  • *Policy 3.4:* Promote opportunities for physical activity for users of all ages and abilities by continuing to improve the quality of existing park and open space facilities and creating recreation programs that reflect the city's rich diversity and local community needs.
  • *Policy 3.5:* Encourage greater community use of existing parks and open spaces by improving safety and access in and around parks and open spaces by encouraging land use, design, and infrastructure improvements that promote healthy and safe community environments and park design, programming, and staff-levels that meet local community safety-needs.
Safe and Just Neighborhoods
• *Objective:* Increase the number of Safe Passage programs that are implemented in the City's low-income neighborhoods.
	would include protocols for protecting pedestrians and homeless populations in the LA River Access Tunnel during flood conditions.

Policy/Goal	Proposed Project
• *Policy 7.2:* Promote the development and implementation of comprehensive strategies that foster safe passages in neighborhoods with high crime and gang activity to ensure that all Angelenos can travel with confidence and without fear.	
L.A.'s Green New Deal (Sustainable City pLAn)	
Urban Ecosystems and Resilience • Ensure proportion of Angelenos living within 0.5 mile of a park or open space is at least 65 percent by 2025; 75 percent by 2035; and 100 percent by 2050.	**Consistent.** The proposed Project would provide open space and recreational opportunities for communities that were determined to have a "high" or "very high" need for parks in the Los Angeles Countywide Comprehensive Parks and Recreation Needs Assessment (Los Angeles County Department of Parks and Recreation, 2016).
River Improvement Overlay District	
Los Angeles Municipal Code *Chapter I, Article 3, Section 13.17(A)* The purpose of a River Improvement Overlay (RIO) District is to: • Support the goals of the Los Angeles River Revitalization Master Plan • Contribute to the environmental and ecological health of the City's watersheds • Establish a positive interface between river adjacent property and river parks and/or greenways • Promote pedestrian, bicycle and other multi-modal connection between the river and its surrounding neighborhoods • Provide an aesthetically pleasing environment for pedestrians and bicyclists accessing the river area • Provide safe, convenient access to and circulation along the river • Promote the river identity of river adjacent communities	**Consistent.** The proposed Project would include elements that would be consistent with the purpose of the RIO District. In addition, the proposed Project would conform to the development regulations of the RIO District. The proposed Project would support the goals of the Los Angeles River Revitalization Master Plan; promote pedestrian and bicycle transportation between the LA River and the Central City North and Boyle Heights Community Plan areas; provide an aesthetically pleasing resource for visitors to the park; and provide safe access to the LA River for pedestrians and bicyclists.
Los Angeles River Revitalization Master Plan	
Revitalize the River • *Goal:* Enable Safe Public Access • *Recommendation #4.8:* Provide opportunities for safe access to the water, ensure that people can	**Consistent.** The proposed Project would feature environmentally sensitive design, such as low impact development and stormwater infrastructure improvements. In addition, the proposed Project would provide open space and recreation opportunities. The proposed Project would be

Policy/Goal	Proposed Project

quickly exit the channel, and establish a flood warning system in the event of high flow conditions.
Green the Neighborhoods
• *Goal:* Connect Neighborhoods to the River
  • *Recommendation #5.6:* Increase direct pedestrian and visual access to the River.
• *Goal:* Extend Open Space and Water Quality Features into Neighborhoods
  • *Recommendation #5.8:* Provide a diverse system of interconnected parks, recreational fields, and outdoor classrooms.
	designed to maintain existing bicycle and pedestrian access to the LA River and enhance community awareness of the LA River. The proposed Project design would also preserve flood control features of the LA River to ensure public safety during flood events. In addition, the proposed Project would include a flood warning system and other elements (i.e., vehicular bollards) to deter the public from entering the LA River during a storm event.

Source: (GPA Consulting, 2019)

3.10.3 Environmental Impact Analysis

3.10.3.1 Screening Analysis

Several impacts and corresponding thresholds of significance in the following section were eliminated from further analysis in this Environmental Impact Report (EIR). Topics were eliminated if the IS for the proposed Project concluded there would be "No Impact," or if impacts were identified to be "Less Than Significant… and will not be discussed further in the EIR." Therefore, only the topics described in the section below were determined to require further analysis in this EIR. A copy of the Initial Study, which contains the eliminated topics, is provided in **Appendix A**.

3.10.3.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and the *L.A. CEQA Thresholds Guide*, the proposed Project would have a significant impact on Land Use and Planning if it would:

XI(b) 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.

H.2 Land Use Compatibility. The determination of significance shall be made on a case-by-case basis, considering the following factors:

- The extent of the area that would be impacted, the nature and degree of impacts, and the type of land uses within that area; and
- The number, degree, and type of secondary impacts to surrounding land uses that could result from implementation of the proposed project.

3.10.3.3 Construction Impacts

XI(b): 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.

The land use plans, policies, and regulations shown in **Table 3.10-2** were established to protect the environment and sensitive land uses, and to ensure that proposed developments are consistent with the character and visions of the City and surrounding communities. As shown in **Table 3.10-2**, the proposed Project is consistent with the land use plans, policies, and regulations in the area.

Proposed construction activities would not result in zoning or land use changes, or a revision to any of the adopted plans or policies at the local and regional levels. All anticipated permits and approvals, summarized in **Table 2-2** of this EIR, would be obtained prior to proposed construction activities. Any necessary land use entitlements would be secured prior to the start of construction activities, and would be coordinated with construction of the Viaduct Replacement Project.

Proposed construction activities would be conducted in compliance with the City's development requirements and construction and building permits outlined in Chapter IX, Article 1 (Building Code) of the City's Municipal Code, as well as the California Building Standards Code (California Code of Regulations [CCR], Title 24). Grading would be required prior to excavation activities in order to prepare the Project Site for construction, requiring a Permit to Construct. Proposed construction activities within the LA River channel are under the supervision of the U.S. Army Corps of Engineers and applicable permits would need to be obtained. In addition, any work within railroad right of way would require a Railroad Maintenance Agreement and any other applicable permits from the affected railroad agency. Upon obtaining all required permits and approvals, the proposed Project would not cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, impacts would be less than significant, and mitigation would not be required.

- **The extent of the area that would be impacted, the nature and degree of impacts, and the type of land uses within that area.**

The Project Area includes an existing construction site, which previously included industrial and commercial land uses. The City obtained these properties as part of the Viaduct Replacement Project. The area surrounding the Project Site is heavily developed with predominately industrial and commercial.

Construction staging and activities would be limited to the existing construction site. Land use and zoning designations in these areas would not prohibit the construction activities required to implement the proposed Project. In addition, construction activities would not require changes in land uses that would conflict with zoning designations.

The proposed Project would be required to obtain permits and approvals prior to construction activities (see **Table 2-2** for required permits and approvals), and would be coordinated with construction of the Viaduct Replacement Project. Proposed construction activities would be conducted in compliance with the City's development requirements and construction and building permits outlined in Chapter IX, Article 1 (Building Code) of the City's Municipal Code, as well as the California Building Standards Code (CCR Title 24). Therefore, impacts would be less than significant and mitigation would not be required.

- **The number, degree, and type of secondary impacts to surrounding land uses that could result from implementation of the proposed project.**

As described above, construction activities would not require changes in existing land uses or zoning designations. The use of construction vehicles and equipment to conduct excavation activities, and other activities involved with the removal or addition of structures, could result in reduced visual character and quality in construction areas that are visible from surrounding land uses; greater air pollutant and greenhouse gas emissions; increased light and noise levels; and decreased mobility and access due to construction traffic on surrounding roadways and road closures/detours. These impacts are discussed in more detail in Sections 3.1 through 3.17.

Construction equipment, materials storage, and most construction activities (other than the movement of equipment and materials to and from the construction site) would be contained within the limits of construction, and construction areas would be fenced. Construction activities would be limited to the days and times specified in the City's Noise Ordinance (Chapter IX, Noise Regulation in the City's Municipal Code), which are Mondays through Fridays between 7 a.m. and 9 p.m., and Saturdays and National Holidays between 8 a.m. and 6 p.m. Construction would not be allowed at any time on Sundays. Therefore, adverse effects would be minimized to the extent feasible. In addition, impacts associated with proposed construction activities would be short-term and temporary. Therefore, impacts would be less than significant and mitigation would not be required.

3.10.3.4 Operational Impacts

XI(b): 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.

The land use plans, policies, and regulations shown in **Table 3.10-2** were established to protect the environment and sensitive land uses, and to ensure that proposed developments are consistent with the character and and visions of the City and surrounding communities. As shown in **Table 3.10-2**, the proposed Project is consistent with the land use plans, policies, and regulations in the area.

The land use for the proposed Project would be consistent with the City's zoning designations. The proposed Project is considered a "Park or Playground (Open outdoor space), operated by government agency" land use, which is only permitted in the following zones (City of Los Angeles, 2018):

- Open Space: OS
- Agricultural: A1, A2, and RA
- Residential Estate: RE and RS
- One-Family Residential: R1, RU, and RZ
- Multiple Residential: RD, RMP, R3, RAS3, R4, RAS4, and R5
- Commercial: CR, C1, C1.5, C2, C4, C5, and CM
- Manufacturing: M1, M2, and M3

In addition, "Park or Playground (Open outdoor space), operated by government agency" land uses may be permitted in the following zones pending Public Benefit project approval:

- Residential Waterways (RW1 and RW2)
- Parking (P and PB)
- Public Facilities (PF).

The proposed Project would be permitted in the portions of the Project Area that are zoned M1, M2, M3, and OS, and would require approval from the City within areas zoned PF. In addition to the zoning designations described above, the Project Site is entirely within the RIO District. The proposed Project would conform to the development regulations for the RIO District outlined in the Municipal Code (Section 13.17), including landscaping, screening/fencing, lighting, and river access requirements. The proposed Project would comply with the design guidelines for projects within the RIO District, as described in the LA River Design Guidebook.

As described in Section 3.10.2.2, the City is in the process of updating the land use and zoning designations in the Central City North and Boyle Heights Community Plan areas. With these updates, the zoning designations within the Project Site would continue to allow parks and recreational facilities. The City's Bureau of Engineering (BOE) would work with the Los Angeles Department of City Planning to ensure that the proposed Project is consistent with any future zoning changes within the Project Area.

The existing Project Site is a construction site within a heavily developed industrialized area. By providing approximately 13 acres of public recreational space, the proposed Project is expected to improve various qualities of the existing Project Site, which include the following:

- The proposed Project would transform an underutilized lot into an aesthetically pleasing landscaped park that would improve the visual character and quality of the Project Site.
- With the exception of emissions generated during from vehicle traffic during infrequent large events, the proposed Project would contribute less criteria air pollutant and greenhouse gas emissions than industrial land use.
- The proposed Project would include trees and other natural and artificial substrates that would potentially create additional nesting and roosting habitat for birds and bats.
- The proposed Project Site soils would be remediated to standards acceptable by the Los Angeles County Fire Department and other regulatory agencies as required.
- The proposed Project would result in improvements to existing stormwater drainage systems.
- The proposed Project would provide open space and recreational facilities that would meet the existing need for parks and recreational facilities in the surrounding communities.
- The proposed Project would generate noise at levels that are less than the noise levels produced by the existing land use.
- With the exception of traffic during large special events, the proposed Project would generate fewer trips than the existing industrial land use. The proposed Project would support active modes of transportation and public transit.
- The proposed Project would include low impact development design and practices to reduce the consumption of water resources and promote beneficial stormwater treatment and/or capture.

The proposed Project also includes safety features to protect the public from hazards associated with surrounding industrial land uses and the LA River. Pedestrian crosswalks would be included at all major roadways intersecting the Project Site (i.e., Santa Fe Avenue, Mission Road, Anderson Street, and Clarence Street). Safety measures will be added to the LA River Access Tunnel Access entry point within the proposed Arts Plaza to deter the public from entering the LA River during a storm event (i.e., vehicular deterrents such as bollards and safety warning devices). The City would also develop a Safety Plan to further minimize impacts on public safety during flood events.

Given the extent of the area that would be impacted, the nature and degree of the impacts, and the existing land use, the proposed Project would not have a significant impact on Land Use and Planning.

3.10.4 Best Management Practices

BMP-LAND-1: Coordination with Los Angeles Department of City Planning

The City BOE shall continue to work with the Los Angeles Department of City Planning to ensure that the proposed Project is consistent with future zoning changes.

BMP-LAND-2: Coordination with Viaduct Replacement Project

Any necessary land use entitlements shall be secured prior to the start of construction activities and shall be coordinated with construction of the Viaduct Replacement Project.

BMP-LAND-3: Construction Area

Construction equipment, materials storage, and construction activities shall be contained within the limits of construction, and construction areas shall be fenced.

3.10.5 Mitigation Measures

Impacts related to Land Use and Planning would be less than significant; therefore, mitigation measures are not required.

3.10.6 Significant Unavoidable Adverse Impacts

There are no significant unavoidable adverse impacts on Land Use and Planning from construction and operation of the proposed Project.

3.10.7 Cumulative Impacts

As discussed in Section 3.10.2.1, the City is proposing updates to land use and zoning designations for the Central City North and Boyle Heights Community Plan areas. In the Central City North Community Plan Area, the proposed land use and zoning designation would include general uses such as hybrid industrial mixed use, creative office, live/work, and production activity (City of Los Angeles, 2017). In the Boyle Heights Community Plan Area, the proposed land use and zoning designation would encourage the preservation of industrial land for employment generating uses and economic development.

As described above, the proposed Project is not expected to result in significant impacts on Land Use and Planning. The proposed development projects listed in **Table 1-1** of this EIR, which include mixed-use developments, creative office spaces, live/work units, commercial spaces, and infrastructure

improvements would not be inconsistent with the City's vision for promoting active transportation, providing LA River connections, and developing additional housing. Many of these projects would be limited to improvements to existing facilities and in-fill developments that would not conflict with existing land uses and zoning designations. These projects would be required to obtain all necessary permits and approvals prior to construction, as well as comply with the City's development requirements and construction and building permits outlined in the City's Municipal Code and the California Building Standards Code. These projects would also be evaluated based on their consistency with the City's land use plans, policies, and regulations. In addition, all projects would be required to develop avoidance, minimization, and mitigation measures. Therefore, the proposed Project would not result in cumulative impacts related to Land Use and Planning.

3.11 Noise and Vibration

This section describes the affected environment and regulatory setting for Noise and Vibration related to the Project Area and surrounding area. In addition, this section describes the potential impacts related to Noise and Vibration that would result from implementation of the proposed Project. As noted in the analysis below, impacts associated with Noise and Vibration during construction or operation of the proposed Project would be less than significant with the incorporation of mitigation measures.

The information in this section is based on the *Noise Impact Assessment for Sixth Street PARC Project* (AMBIENT Air Quality & Noise Consulting, 2019).

3.11.1 Introduction

3.11.1.1 Acoustic Fundamentals

Noise is generally defined as sound that is loud, disagreeable, or unexpected. Sound is mechanical energy transmitted in the form of a wave because of a disturbance or vibration. Sound levels are described in terms of both amplitude and frequency.

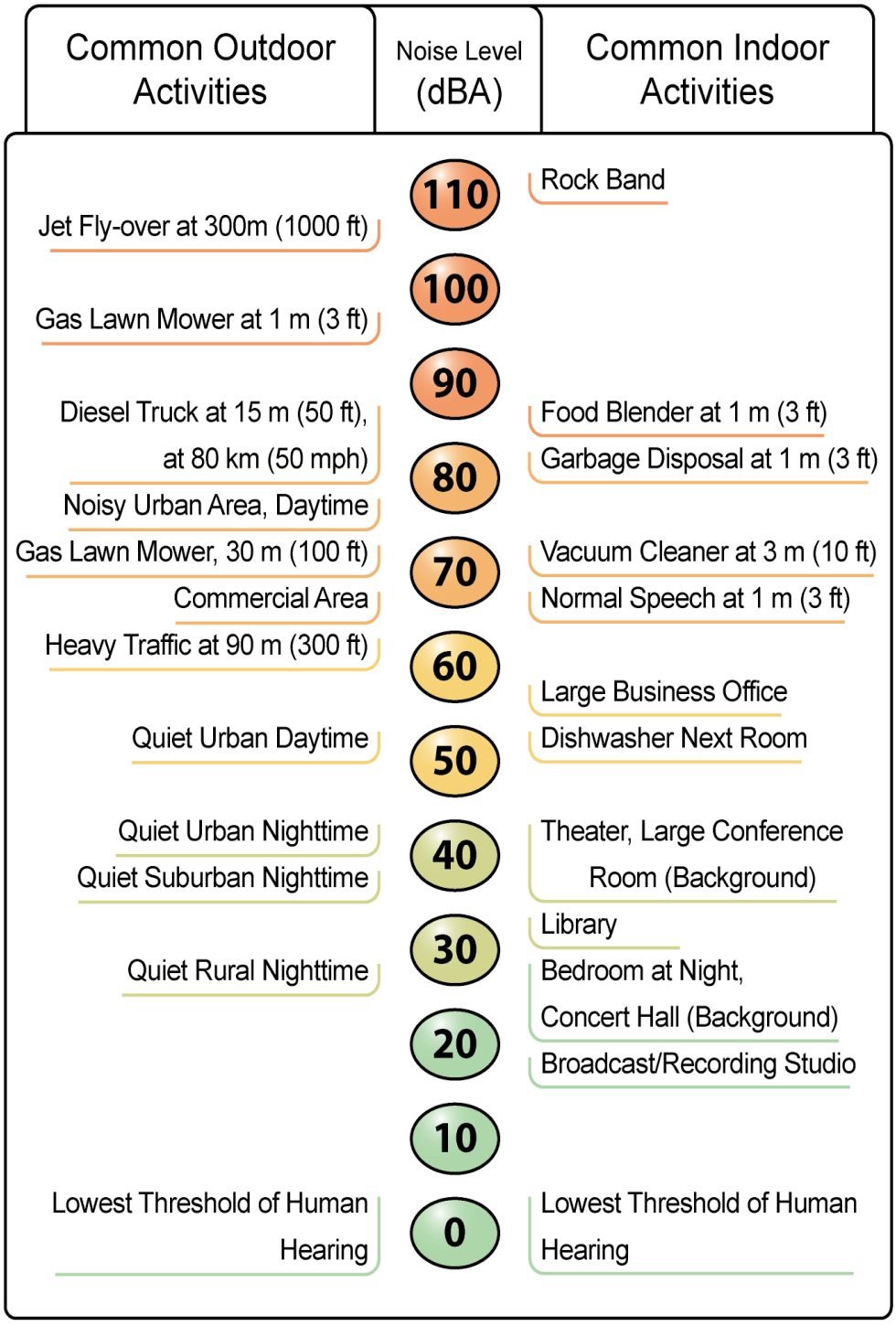
Amplitude

Amplitude is defined as the difference between ambient air pressure and the peak pressure of the sound wave. Amplitude is measured in decibels (dB) on a logarithmic scale. Amplitude is interpreted by the ear as corresponding to different degrees of loudness. Laboratory measurements correlate a 10 dB change as a doubling or halving of loudness and establish a 3 dB change in amplitude as the minimum audible difference perceptible to the average person.

Frequency

The frequency of a sound is defined as the number of fluctuations of the pressure wave per second. The unit of frequency is the Hertz (Hz). One Hz equals one cycle per second. The human ear is not equally sensitive to sound of different frequencies. For instance, the human ear is more sensitive to sound in the higher portion of this range than in the lower and sound waves below 16 Hz or above 20,000 Hz cannot be heard at all. To approximate the sensitivity of the human ear to changes in frequency, environmental sound is usually measured in what is referred to as "A-weighted decibels" (dBA). On this scale, the normal range of human hearing, for most people, extends from about 3 dBA to about 140 dBA with 130 dbA being the threshold of pain (California Department of Transportation, 2013a; California Department of Transportation, 2017). Common community noise sources and associated noise levels, in dBA, are depicted in **Figure 3.11-1**, Common Noise Levels.

Figure 3.11-1: Common Noise Levels



Source: (California Department of Transportation, 2013a)

Addition of Decibels

Because decibels are logarithmic units, sound levels cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3-dB increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions. For example, if one automobile produces a sound level of 70 dB when it passes an observer, two cars passing simultaneously would not produce 140 dB; rather, they would combine to produce 73 dB. Under the decibel scale, three sources of equal loudness together would produce an increase of 5 dB.

3.11.1.2 Sound Propagation and Attenuation

Geometric Spreading

Noise sources are generally characterized as either a localized source (i.e., point source) or a line source. Examples of point sources include construction equipment, vehicle horns, alarms, and amplified sound systems. Examples of a line sources include trains and on-road vehicular traffic. Sound from a point source propagates uniformly outward in a spherical pattern.

For a point source, sound levels generally decrease (attenuate) at a rate of approximately 6 dB for each doubling of distance from the source, depending on ground surface characteristics. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver), no excess ground attenuation is assumed. Parking lots and bodies of water are examples of hard surfaces which generally attenuate at this rate. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver, such as soft dirt, grass, or scattered bushes and trees), an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. When soft surfaces are present, the excess ground attenuation for soft surfaces generally results in an overall attenuation rate of approximately 7.5 dB per doubling of distance from the point source.

On-road vehicle traffic consists of several localized noise sources on a defined path, and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels for line sources attenuate at a rate of approximately 3 decibels for each doubling of distance for hard sites and approximately 4.5 decibels per doubling of distance for soft sites.

Atmospheric Effects

Receptors located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) from the highway due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have substantial effects on noise levels.

Shielding by Natural or Human-Made Features

A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of

the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receiver specifically to reduce noise. A barrier that breaks the line of sight between a source and a receiver will typically result in minimum 5 dB of noise reduction. Taller barriers provide increased noise reduction.

Noise reductions afforded by building construction can vary depending on construction materials and techniques. Standard construction practices typically provide approximately 15 dBA exterior-to-interior noise reductions for building facades, with windows open, and approximately 20-25 dBA, with windows closed. With compliance with current building construction and insulation requirements, exterior-to-interior noise reductions typically average approximately 25 dBA. The absorptive characteristics of interior rooms, such as carpeted floors, draperies and furniture, can result in further reductions in interior noise.

3.11.1.3 Noise Descriptors

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (i.e., energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the sound-pressure level in that range. In general, people are most sensitive to the frequency range of 1,000 to 8,000 Hz and perceive sounds within that range better than sounds of the same amplitude in higher or lower frequencies. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies, which is referred to as the "A-weighted" sound level (expressed in units of dBA). The A-weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. Other weighting networks have been devised to address high noise levels or other special problems (e.g., B-, C-, and D-scales), but these scales are rarely used in conjunction with environmental noise.

The intensity of environmental noise fluctuates over time, and several descriptors of time-averaged noise levels are typically used. For the evaluation of environmental noise, the most commonly used descriptors are the energy-equivalent noise level (L_{eq}), day-night average noise level (L_{dn}), community equivalent noise level (CNEL) and sound-exposure level (SEL). L_{eq} is a measure of the average energy content (intensity) of noise over any given period. Many communities use 24-hour descriptors of noise levels to regulate noise. L_{dn} is the 24-hour average of the noise intensity, with a 10-dBA "penalty" added for nighttime noise (10 p.m. to 7 a.m.) to account for the greater sensitivity to noise during this period. CNEL is similar to L_{dn} but adds an additional 5-dBA penalty for evening noise (7 p.m. to 10 p.m.) Another descriptor that is commonly discussed is the SEL, also referred to as the single-event noise exposure level. The SEL describes a receiver's cumulative noise exposure from a single noise event, which is defined as an acoustical event of short duration (0.5 second), such as a backup beeper, the sound of an airplane traveling overhead, or a train whistle. Common noise level descriptors are summarized in **Table 3.11-1**.

Table 3.11-1: Common Acoustical Descriptors

Descriptor	Definition
Energy Equivalent Noise Level (L_{eq})	The energy mean (average) noise level. The instantaneous noise levels during a specific period of time in dBA are converted to relative energy values. From the sum of the relative energy values, an average energy value (in dBA) is calculated.
Minimum Noise Level (L_{min})	The minimum instantaneous noise level during a specific period of time.
Maximum Noise Level (L_{max})	The maximum instantaneous noise level during a specific period of time.
Day-Night Average Noise Level (L_{dn})	The L_{dn} takes into account both the frequency of occurrence and duration of all noise events during a 24-hour period with a 10 dBA "penalty" for noise events that occur between the more noise-sensitive hours of 10:00 p.m. and 7:00 a.m. In other words, 10 dBA is "added" to noise events that occur in the nighttime hours to account for increases sensitivity to noise during these hours.
Community Noise Equivalent Level (CNEL)	The CNEL is similar to the L_{dn} described above, but with an additional 5 dBA "penalty" added to noise events that occur between the hours of 7:00 p.m. to 10:00 p.m. The calculated CNEL is typically approximately 0.5 dBA higher than the calculated L_{dn}.
Single Event Level (SEL)	The level of sound accumulated over a given time interval or event. Technically, the sound exposure level is the level of the time-integrated mean square A-weighted sound for a stated time interval or event, with a reference time of one second.

Source: (AMBIENT Air Quality & Noise Consulting, 2019)

3.11.1.4 Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels. When community noise interferes with human activities or contributes to stress, public annoyance with the noise source increases. The acceptability of noise and the threat to public well-being are the basis for land use planning policies preventing exposure to excessive community noise levels.

Unfortunately, there is no completely satisfactory way to measure the subjective effects of noise or of the corresponding reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and habituation to noise over differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a

new noise is the comparison of it to the existing environment to which one has adapted: the so-called "ambient" environment. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged. Regarding increases in A-weighted noise levels, knowledge of the following relationships will be helpful in understanding this analysis (Kryter, 1970):

- A change of 1 dB cannot be perceived by humans, except in carefully controlled laboratory experiments.
- Outside of the laboratory, a 3-dB change is considered a just-perceivable difference.
- A change in level of at least 5 dB is required before any noticeable change in community response would be expected.
- A 10-dB change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

3.11.1.5 Vibration Fundamentals

Vibration is an oscillating motion of the earth, which can result from either natural (e.g., earthquakes and volcanic eruptions) or manmade sources (e.g., explosions). As with noise, vibration can be described by both its amplitude and frequency. Amplitude can be described in terms of displacement, velocity, or acceleration. Displacement is the distance that a point on the ground moves away from its static position. Velocity is defined as the instantaneous speed of the ground movement and acceleration is defined as the rate of change in velocity with respect to time.

Although displacement is easier to understand than velocity or acceleration, it is rarely used for describing groundborne vibration. In addition, the effects of groundborne vibration, including human reaction and effects on buildings, is commonly described in environmental assessments using either velocity (measured in inches or millimeters per second) or acceleration (measured in gravities). Frequency is defined as the number of oscillations per second that a particle makes when under the influence of seismic waves. The frequency of a vibration can also affect human perception (California Department of Transportation, 2013b).

The rate at which vibration travels through the earth is referred to as propagation. As with noise, the energy of a vibration wave decreases as the waves propagates with increased distance from a source. Various other factors can also influence the loss of wave energy, including soil type and condition, as well as, the frequency of the wave (California Department of Transportation, 2013b).

3.11.2 Regulatory Setting

Federal, state, and local governments have established noise standards and guidelines to protect citizens from potential hearing damage and various other adverse physiological and social effects associated with noise. Those regulations most applicable to the community are summarized in the following sections.

3.11.2.1 Noise

City of Los Angeles General Plan

Noise Element

The existing Noise Element of the *City of Los Angeles General Plan* includes noise standards intended to ensure compatibility of proposed land uses within exterior noise environments and that noise levels at adjacent land uses do not exceed acceptable levels. These standards are also designed to protect existing land uses, including transportation and industry, from encroaching urban uses. The City's exterior and interior noise standards for General Plan land use designations are summarized in **Table 3.11-2**, City of Los Angeles Land Use Compatibility Noise Criteria. As depicted, areas designated for outdoor spectator sports are generally considered unacceptable in areas of noise exposure above 70 dBA CNEL (i.e., weighted average of noise level over time). These same land uses are considered conditionally acceptable in areas up to 75 dBA CNEL provided that potential noise impacts have been evaluated and any necessary noise-reduction measures have been implemented (City of Los Angeles, 1999).

Land Use Element

The Land Use element of the City's General Plan includes Community Plans for 35 community plan areas (along with LAX and Port Plans) within Los Angeles to address the specific needs and wishes of each community. Land use designations help inform decision-makers, as well as the public, on types of future development to pursue in various areas and neighborhoods. General land use maps were developed for the communities of Boyle Heights and Central City North where the Project Area is located. The Community Plans for Boyle Heights and Central City North are currently undergoing updates.

Boyle Heights Community Plan

The portion of the Project Area east of the LA River is located in the Boyle Heights community. The Boyle Heights Community Plan is part of the City of Los Angeles General Plan and discusses the major planning land use issues and opportunities facing the community. The Boyle Heights Community Plan also establishes a framework for development in accordance with the community's land use policies and programs (City of Los Angeles, 1998).

The Boyle Heights Community Plan is currently being updated, with a draft released in October 2017. The draft plan addresses issues and opportunities related to preserving existing affordable housing; advocating for environmental justice; promoting economic strength and growth; and encouraging safe, walkable, and vibrant neighborhoods. The draft plan is intended to account for future anticipated growth and development through 2040. The draft plan introduces urban design principles that encourage sustainable development in a way that complements the existing built environment.

Central City North Community Plan

The portion of the Project Area west of the LA River is located in the Central City North community. The Central City North Community Plan is part of the City of Los Angeles General Plan and discusses the land use policies and programs in the community (City of Los Angeles, 2000).

The City is currently updating the Downtown Community Plan, also known as DTLA 2040 Plan, which includes both the Central City North and Central City Community plan areas and includes updates for long-term policies, plans, and programs in Downtown Los Angeles (City of Los Angeles, 2019). The proposed DTLA 2040 Plan intends to address Downtown Los Angeles' growth in population, housing, and employment. An emphasis on transit and new zoning tools are central to the proposed DTLA 2040 Plan.

City of Los Angeles Municipal Code

The City of Los Angeles Municipal Code (LAMC) provides noise guidelines and standards for significant noise disturbances in Chapter XI, Noise Regulation. This Chapter is intended to prohibit unnecessary, excessive, and annoying noises from all sources subject to its police power. Accordingly, noise-generating construction activities are generally limited during the hours of 9:00 p.m. and 7:00 a.m., which would result in noise disturbance of occupants of a nearby residence or hotel. In addition, the LAMC also specifies the maximum noise level of powered equipment or powered hand tools. Between the hours of 7:00 a.m. and 10:00 p.m., in any residential zone of the City or within 500 feet thereof, no person shall operate or cause to be operated any powered equipment or powered hand tool that produces a maximum noise level exceeding the following noise limits at a distance of 50 feet therefrom:

(a) 75 dBA for construction, industrial, and agricultural machinery including crawler-tractors, dozers, rotary drills and augers, loaders, power shovels, cranes, derricks, motor graders, paving machines, off-highway trucks, ditchers, trenchers, compactors, scrapers, wagons, pavement breakers, compressors and pneumatic or other powered equipment;

(b) 75 dBA for powered equipment of 20 HP or less intended for infrequent use in residential areas, including chain saws, log chippers and powered hand tools;

(c) 65 dBA for powered equipment intended for repetitive use in residential areas, including lawn mowers, backpack blowers, small lawn and garden tools and riding tractors;

Said noise limitations shall not apply where compliance therewith is technically infeasible. Technical infeasibility shall mean that said noise limitations cannot be complied with despite the use of mufflers, shields, sound barriers and/or other noise reduction device or techniques during the operation of the equipment.

City of Los Angeles CEQA Thresholds

The City provides CEQA significance thresholds for noise analyses. **Table 3.11-2** presents the City's guidelines for determining acceptable and unacceptable community noise exposure limits for various land use categories.

Table 3.11-2: City of Los Angeles Land Use Noise Compatibility Guidelines

Land Use	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Single-Family, Duplex, Mobile Homes	50–60	55–70	70–75	above 70
Multifamily Homes	50–65	60–70	70–75	above 70
Schools, Libraries, Churches, Hospitals, Nursing Homes	50–70	60–70	70–80	above 80
Transient Lodging – Motels, Hotels	50–65	60–70	70–80	above 80
Auditoriums, Concert Halls, Amphitheaters	—	50–70	—	above 65
Sports Arena, Outdoor Spectator Sports	—	50–75	—	above 70
Playgrounds, Neighborhoods Parks	50–70	—	67–75	above 72
Golf Courses, Riding Stables, Water, Recreation, Cemeteries	50–75	—	70–80	above 80

Normally Acceptable: *Specified land use is satisfactory, based on the assumption that any buildings involved are of normal conventional construction and without any special noise insulation requirements.*
Conditionally Acceptable: *New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air-conditioning, will normally suffice.*
Normally Unacceptable: *New construction or development generally should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.*
Clearly Unacceptable: *New construction or development generally should not be undertaken.*
Source: (City of Los Angeles, 2006).

3.11.2.2 Groundborne Vibration

There are no federal, state, or local regulatory standards for groundborne vibration. The California Department of Transportation (Caltrans) has developed vibration criteria based on potential structural damage risks and human annoyance, which the City has adopted for this EIR. Caltrans-recommended criteria for the evaluation of groundborne vibration levels, with regard to structural damage and human annoyance, are summarized in **Table 3.11-3**. The criteria apply to continuous vibration sources, which include vehicle traffic, train, and most construction vibrations, except for transient or intermittent construction activities, such as pile driving. Damage criteria for buildings are in terms of ground motion at the buildings' foundations. No allowance is included for the amplifying effects of structural components (California Department of Transportation, 2013b).

Table 3.11-3: Summary of Groundborne Vibration Levels and Potential Effects

Vibration Level (in/sec ppv)	Human Reaction	Effect on Buildings
0.006-0.019	Threshold of perception; possibility of intrusion.	Vibrations unlikely to cause damage of any type.
0.08	Vibrations readily perceptible.	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected.
0.10	Level at which continuous vibrations begin to annoy people.	Virtually no risk of "architectural" damage to normal buildings.
0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations).	Threshold at which there is a risk of "architectural" damage to fragile buildings and buildings with plastered walls and ceilings.
0.4-0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges.	Potential risk of "architectural" damage may occur at levels above 0.3 in/sec ppv for older residential structures and above 0.5 in/sec ppv for newer structures.

The vibration levels are based on ppv in the vertical direction for continuous vibration sources, which includes most construction activities, with the exception of transient or intermittent construction activities, such as pile driving. For pile driving, the minimum criterion level is typically considered to be 0.2 in/sec ppv.
in/sec = inches per second; ppv = peak particle velocity
Source: (California Department of Transportation, 2013b)

As shown in **Table 3.11-3**, the minimum "architectural damage risk level" for continuous vibrations is a peak particle velocity (ppv) of 0.2 inches per second (in/sec) for fragile buildings or buildings with plastered walls and ceilings. This same level corresponds to the level at which vibrations typically become annoying to people in buildings. The "architectural damage risk level" ranges from 0.3 in/sec ppv for older residential structures to 0.5 in/sec ppv for newer structures. (California Department of Transportation, 2013b)

3.11.3 Environmental Setting

3.11.3.1 Noise-Sensitive Land Uses

Noise-sensitive land uses are generally considered to include those uses that would result in noise exposure that could cause health-related risks to individuals. Places where quiet is essential are also considered noise-sensitive uses. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Other land uses such as libraries, places of worship, and recreation areas are also considered noise-sensitive land uses.

Existing land uses located to the north, south, and west of the Project Site (i.e., project footprint) consist predominantly of a mix of industrial and commercial uses. The nearest noise-sensitive land uses in the vicinity of the proposed East Park are residential uses located approximately 350 feet to the north of the proposed East Park, along S. Clarence Street. The nearest noise-sensitive land use in the vicinity of the proposed West Park is a residential development referred to as the "Brick Lofts", which is located approximately 700 feet south of the proposed West Park, near the intersection of Mateo Street and Jesse Street. Additional residential land uses are located approximately 700 feet to the east of the proposed East Park, across U.S. Highway 101 (U.S. 101) (refer to **Figure 3.11-2**, Nearby Land Uses and Noise Monitoring Locations).

Other noise-sensitive land uses are over 1,500 feet from the Project Area. The nearest schools are School of Santa Isabel and Bishop Mora Salesian High School, both approximately 1,600 feet east of the Project Area (proposed East Park). Hollenbeck Park, the nearest recreation area, is approximately 3,200 feet northeast of the Project Area (proposed East Park). The nearest place of worship is Santa Isabel Church, approximately 1,600 feet east of the Project Area (proposed East Park). Benjamin Franklin Library, approximately 3,700 feet northeast of the Project Area, is nearest library (proposed East Park).

3.11.3.2 Existing Noise Environment

Short-term (10-minute) noise level measurements were conducted on November 10, 2016, for the purpose of documenting and measuring the existing noise environment at various locations in the vicinity of the proposed Project Site. Ambient noise measurement locations and corresponding measured values in L_{eq} and L_{max} are summarized in **Table 3.11-4**.

As indicated in **Table 3.11-4**, measured ambient noise levels ranged from approximately 61-65 dBA L_{eq} during the daytime hours and from approximately 52-60 dBA L_{eq} during the evening and nighttime hours. In general, nighttime noise levels are approximately 5-10 dB lower than daytime noise levels. Based on the measurements conducted, ambient noise levels in the proposed Project Site vicinity are largely influenced by vehicle traffic on area roadways. Additional major noise sources in the Project Area include trains traveling along the Union Pacific Railroad (UPRR) and Metrolink rail lines, which are generally located along the west and east banks of the Los Angeles River. Existing traffic and railroad noise levels are discussed in the following sections.

Roadway Traffic Noise

Existing roadway traffic noise levels were calculated using the Federal Highway Administration (FHWA) Roadway Noise Prediction Model (FHWA RD-77-108) based on traffic data obtained from the *Traffic Impact Analysis* prepared for the proposed Project (Kimley-Horn and Associates, Inc., 2019a). Traffic volumes/data were generated for an opening year of 2023. Due to project delays, it is now not anticipated that the park will be open until 2024 at the earliest. There is not anticipated to be a substantial difference in projected traffic volumes/data from Year 2023 to Year 2024.

Figure 3.11-2: Nearby Land Uses and Noise Monitoring Locations

Source: (AMBIENT Air Quality & Noise Consulting, 2019)

Table 3.11-4: Summary of Measured Ambient Noise Levels

Location	Monitoring Period	Primary Noise Sources	Noise Levels (dBA)	
			L_{eq}	L_{max}
ST-1. Santa Fe Avenue at Sixth Street, approximately 20 feet from road centerline.	11:10-11:20	Vehicle Traffic	64.9	79.6
	20:00-20:10	Vehicle Traffic	60.2	77.5
ST-2. S. Clarence Street at Inez Street at residential property line.	13:00-13:10	Vehicle Traffic	62.4	68.1
	21:10-21:20	Vehicle Traffic	56.3	69.4
ST-3. S. Clarence Street at Jesse Street, approximately 15 feet from road centerline.	11:50-12:00	Vehicle Traffic	60.5	72.3
	21:50-22:00	Vehicle Traffic	55.6	70.5
ST-4. Mateo Street at Jesse Street, approximately 30 feet from road centerline.	12:20-12:40	Vehicle Traffic	61.2	73.8
	20:30-20:40	Vehicle Traffic	52.4	75.2

*Refer to **Figure 3.11-2** for noise monitoring locations.*
Noise measurements were conducted on November 3rd, 2017 using a Larson Davis Model 820 Type I sound level meter.
dBA = A-Weighted Decibels
Source: (AMBIENT Air Quality & Noise Consulting, 2019)

Predicted traffic noise levels and distances to projected traffic noise contours for major roadways are summarized in **Table 3.11-5**. Projected traffic noise contours do not include attenuation or shielding provided by intervening structures. Based on the modeling conducted, existing traffic noise levels along area roadways range from approximately 50 to 67 dBA CNEL at 50 feet from the near-travel-lane centerline.

Table 3.11-5: Existing Roadway Traffic Noise Levels & Contour Distances

Roadway Segment	CNEL at 50 ft. from Near-travel-lane Centerline	Distance to CNEL Contour (Feet from Road Centerline)		
		70	65	60
Fourth Street, West of Clarence Street	67	WR	111	233
Sixth Street, West of Mateo Street	65	WR	67	139
Sixth Street, East of Mateo Street	64	WR	63	131
Seventh Street, West of Boyle Avenue	63	WR	64	125
Seventh Street, East of Alameda Street	65	WR	66	139
Seventh Street, West of Mateo Street	64	WR	59	121
Seventh Street, West of Santa Fe Avenue	64	WR	56	115

Seventh Street, East of Santa Fe Avenue	65	WR	63	132
Alameda Street, North of Sixth Street	65	WR	85	173
Alameda Street, South of Sixth Street	65	WR	85	173
Clarence Street, South of Fourth Street	50	WR	WR	WR
Mateo Street, North of Seventh Street	59	WR	WR	WR
Mateo Street, South of Sixth Street	60	WR	WR	52
Mateo Street, North of Sixth Street	59	WR	WR	WR
Santa Fe Avenue, South of Fourth Street	63	WR	WR	84
Santa Fe Avenue, North of Seventh Street	61	WR	WR	69
Whittier Street, West of Boyle Avenue	65	WR	67	141

Traffic noise levels for area roadways were calculated based on data obtained from the Traffic Impact Analysis prepared for the proposed Project (Kimley-Horn and Associates, Inc., 2019a).
Predicted noise contours do not include shielding by intervening structures.
WR=Within Roadway Right-of-Way, CNEL = Community Equivalent Noise Level

Railroad Noise

The UPRR and Metrolink/Amtrak rail lines run in a general north-south direction located along the west and east banks of the Los Angeles River (refer to **Figure 3.11-2**, Nearby Land Uses and Noise Monitoring Locations). Freight train volumes can vary depending on market demands. In year 2000, the UPRR operated approximately 59 through freight trains per peak day over this line. The number of average freight trains dropped to approximately 51 trains per day in 2010, but is projected to increase in future years. By 2035, freight traffic is estimated to average approximately 111 trains per day (Southern California Association of Governments, 2011). Existing Metrolink and Amtrak passenger train volumes currently average approximately 20 trains per day and 12 trains per day, respectively (Metrolink, 2018; Amtrak, 2018).

Predicted railroad noise levels were calculated using the Federal Transit Administration's (FTA) *Noise and Vibration Impact Assessment* guidelines (Federal Transit Administration, 2006). Average-daily freight and passenger train volumes were distributed equally among the track lines running along the west and east banks of the Los Angeles River. Predicted average-daily train volumes at the nearest Project Site boundaries were calculated based on distance from the centerline of the east bank and west bank railroad corridors. Existing railroad noise levels are summarized in **Table 3.11-6**. As depicted, railroad noise levels are largely dominated by freight train traffic. In total, predicted average-daily railroad noise levels average approximately 70 dBA CNEL at approximately 100 feet from the centerline of the east and west bank rail line corridors. Combined existing noise levels at the nearest Project Site boundaries, taking into account contributions from both east and west bank rail corridors, would average approximately 71 dBA CNEL. Modeling assumptions and output files are included in *Noise Impact Assessment for Sixth Street PARC Project*.

Table 3.11-6: Existing Railroad Operations and Noise Levels

Rail Line	Total Average Trains/Day[1]	CNEL (dBA) at 100 feet[2]		Combined CNEL (dBA) at Project Site Property Line[3]
		West Bank	East Bank	
UPRR	59	70	70	71
Metrolink	20	56	56	
Amtrak	12	54	54	
Total:	91	70	70	

1. Average-daily freight train volumes based on maximum of 59 trains/day based on year 2000-2010 estimated volumes (Southern California Association of Governments, 2011). Amtrak and Metrolink train volumes derived from the existing train schedules.
2. Total average-daily train volumes were distributed equally among west bank and east bank rail lines.
3. Combined noise levels at the Project Site property line were calculated taking into account existing UPRR, Metrolink, and Amtrak train volumes. Includes contributions from west bank and east bank rail lines.
UPRR = Union Pacific Railroad, CNEL = Community Equivalent Noise Level, dBA = A-Weighted Decibels

3.11.4 Environmental Impact Analysis

3.11.4.1 Methodology

Construction Noise

Construction noise levels were evaluated based on typical equipment noise levels derived from the FHWA's Roadway Construction Noise Model, version 1.1 (2008). Predicted construction noise levels at the nearest noise-sensitive land uses were quantified assuming that the three loudest pieces of equipment associated with onsite activities could potentially operate simultaneously at the nearest construction site boundary. A minimum 10-dB reduction for intervening structures was applied (U.S. Department of Housing and Urban Development, 1973). Modeling assumptions and output files are included in the *Noise Impact Assessment for Sixth Street PARC Project* (AMBIENT Air Quality & Noise Consulting, 2019).

Operational Noise

Traffic noise levels along major area roadways were estimated using the FHWA Highway Traffic Noise Prediction model (FHWA-RD-77-108.) The FHWA modeling was based upon the California Vehicle Noise (Calveno) emission levels for automobiles and medium- and heavy-duty trucks. Input data used in the model included traffic volumes, day/night percentages of automobiles and medium and heavy trucks, vehicle speeds, ground attenuation factors, roadway widths, and ground elevation data. Traffic volumes for roadway segments in the proposed Project Site vicinity were derived from *Traffic Impact Analysis* prepared for the proposed Project (Kimley-Horn and Associates, Inc., 2019a). Modeling assumptions and output files are included in the *Noise Impact Assessment* prepared for the proposed Project (AMBIENT Air Quality & Noise Consulting, 2019).

Noise levels associated with onsite recreational uses and events were assessed based on the estimated capacity for major onsite events assuming that fifty percent of the attendees would be male and fifty percent would be female. Where applicable, noise levels associated with the use of amplified public address/sound systems were included. Predicted operational noise levels at the nearest noise-sensitive land uses were quantified assuming an average noise-attenuation rate of 6 dB per doubling of distance from the source and up to 10 dB reduction for intervening structures. Modeling assumptions and output files are included in the *Noise Impact Assessment for Sixth Street PARC Project* (AMBIENT Air Quality & Noise Consulting, 2019).

For determination of land use compatibility for the proposed Project, transportation noise levels for U.S. 101 and the adjacent rail lines were calculated for future year 2035 conditions. Traffic noise levels for U.S. 101 were quantified using the FHWA's Roadway Noise Prediction Model (FHWA RD-77-108) based on an estimated year 2035 traffic volume of 173,700 vehicles per day (California Department of Transportation, 2013c). Predicted railroad noise levels were calculated in accordance with the FTA's *Noise and Vibration Impact Assessment* (2006) guidelines assuming projected future year 2035 train volumes of 111 freight trains per day and 37 passenger trains per day (Southern California Association of Governments, 2011). Projected year 2035 passenger train volumes were calculated based on existing volumes and a projected future increase of 1.6 passenger trains per 5-year period for the Los Angeles region (Southern California Association of Governments, 2012). Average-daily freight and passenger train volumes were distributed equally among the track lines running along the west and east bank of the Los Angeles River. Predicted average-daily train volumes at the nearest Project Site boundaries were calculated based on distance from the centerline of the east bank and west bank railroad corridors. Modeling assumptions and output files are included in the *Noise Impact Assessment* prepared for the proposed Project (AMBIENT Air Quality & Noise Consulting, 2019).

Groundborne Vibration

Groundborne vibration levels associated with the proposed Project were qualitatively assessed based on construction-equipment vibration levels typically associated with off-road construction equipment (California Department of Transportation, 2013b). Short-term and long-term impacts associated with transportation and non-transportation noise sources were assessed based on potential increases in ambient noise levels anticipated to occur with proposed Project implementation.

3.11.4.2 Screening Analysis

Several impacts and corresponding thresholds of significance in the following section were eliminated from further analysis in this EIR. Topics were eliminated if the IS for the proposed Project concluded there would be "No Impact," or if impacts were identified to be "Less Than Significant… and will not be discussed further in the EIR." Therefore, only the topics described in the section below were determined to require further analysis in this EIR. A copy of the Initial Study, which contains the eliminated topics, is provided in **Appendix A**.

3.11.4.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and the *L.A. CEQA Thresholds Guide*, the proposed Project would have a significant impact on Noise and Vibration if it would:

XIII(a) 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.

I.1 Construction Noise. 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.

I.2 Operational Noise. A project would normally have a significant impact on noise levels from project operations if the project causes the ambient noise level measured at the property line of affected uses to increase by 3 dBA in CNEL to or within the "normally unacceptable" or "clearly unacceptable" category, or any 5 dBA or greater noise increase (See **Table 3.11-2**).

XIII(b) Result in generation of excessive groundborne vibration or groundborne noise levels.

3.11.4.4 Construction Impacts

XIII(a): 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.

Construction noise typically occurs intermittently and varies depending upon the nature or phase of construction (e.g., land clearing, grading, excavation, and building construction). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Temporary increases in ambient noise levels, particularly during the nighttime hours, could result in increased levels of annoyance and potential sleep disruption. Although noise ranges were found to be similar for all construction phases, the grading phase tends to involve the most equipment and resulted in slightly higher average-hourly noise levels. Typical noise levels for individual pieces of construction equipment expected to be used during project construction and distances to predicted noise contours are summarized in **Table 3.11-7** (Federal Transit Administration, 2006; Federal Highway Administration, 2017).

As depicted in **Table 3.11-7**, individual equipment noise levels commonly associated with residential development projects typically range from approximately 73 to 83 dBA L_{eq} at 50 feet with intermittent noise levels reaching up to approximately 90 dBA L_{max} at this same distance. Assuming that multiple pieces of construction equipment would be operating simultaneously near the construction site boundary, predicted construction noise levels during the most intensive activities (e.g., grading and excavation) could reach levels of approximately 88 dBA L_{eq} at 50 feet from the Project Site.

Table 3.11-7: Typical Construction Equipment Noise

Equipment	Typical Noise Level (dBA) 50 feet from Source		Distance to Noise Contours (feet, dBA L_{eq})		
	L_{max}	L_{eq}	70 dBA	65 dBA	60 dBA
Air Compressor	80	76	105	187	334
Backhoe/Front End Loader	80	76	105	187	334
Compactor (Ground)	80	73	74	133	236
Concrete Mixer Truck	85	81	187	334	594
Concrete Saw	90	83	236	420	748
Crane	85	77	118	210	374
Dozer/Grader/Excavator/Scraper	85	81	187	334	594
Drill Rig Truck	84	77	118	210	374
Generator	82	79	149	265	472
Gradall	85	81	187	334	594
Hydraulic Break Ram	90	80	167	297	529
Jack Hammer	85	78	133	236	420
Impact Hammer/Hoe Ram (Mounted)	90	83	236	420	748
Pavement Scarifier/Roller	85	78	133	236	420
Paver	85	82	210	374	667
Pneumatic Tools	85	82	210	374	667
Pumps	77	74	83	149	265
Truck (Dump/Flat Bed)	84	80	167	297	529

Based on maximum equipment noise levels. Actual noise levels are typically lower, particularly if equipment is fitted with exhaust mufflers and engine shrouds.
Sources: (Federal Transit Administration, 2006; Federal Highway Administration, 2017)

Construction activities would comply with the allowable hours of construction in the LAMC. Accordingly, construction activities would be limited to Monday through Friday between the hours of 7:00 a.m. to 4:00 p.m., unless otherwise approved by the engineer. Construction on Saturdays from 8:00 a.m. to 6:00 p.m. would be permissible upon approval by the engineer. Construction activities would be prohibited on Sundays and Federal holidays, unless approved by the engineer.

The LAMC limits equipment noise levels to 75 dBA at 50 feet unless technically infeasible. Noise levels associated with onsite construction activities at nearby noise-sensitive land uses, assuming multiple pieces of equipment operating simultaneously, were quantified and are summarized in **Table 3.11-8**. Project construction would not result in a significant increase in daytime ambient noise levels at the

nearest noise-sensitive land uses. However, as noted above, noise levels from individual pieces of equipment, which generally range from 73 to 83 dBA L_{eq} at 50 feet, could potentially exceed the allowable noise level stated in the LAMC. Therefore, the City is adopting **MM-NOISE-1**, which would reduce construction noise to less than significant levels. The proposed mitigation would limit construction activities to the less noise-sensitive periods of the day, which would minimize potential disturbance to nearby residential land uses. The use of mufflers on off-road equipment would reduce equipment noise levels by approximately 10 dBA (**BMP-NOISE-1**). Additional measures were also included to further minimize potential disturbance to nearby land uses, including limitation on equipment idling and locations for equipment staging and queuing areas. Additional measures may also be implemented on an "as-needed" basis to address public concerns.

Table 3.11-8: Construction Noise Levels at Nearby Noise-Sensitive Land Uses

Construction Activity	Noise Level (dBA Leq) at Nearby Noise-Sensitive Land Uses							
	Brick Lofts Residential				Multi-Family Residential on S. Clarence St.			
	Project Construction	Daytime Ambient	Project Plus Ambient	Change	Project Construction	Daytime Ambient	Project Plus Ambient	Change
Site Preparation/ Grubbing	50	61	61	0	56	62	62	1
Grading/ Excavation	51	61	61	0	57	62	62	1
Asphalt Demolition	50	61	61	0	56	62	62	1
Park Construction and Infrastructure Installation	45	61	61	0	51	62	62	0
Paving	46	61	61	0	52	62	62	0
Utilities	46	61	61	0	52	62	62	0
Building Construction	47	61	61	0	53	62	62	1
In-River Terracing	49	61	61	0	48	62	62	0

Construction noise levels were quantified assuming the three loudest pieces of equipment operating simultaneously at the nearest construction site boundary. Predicted noise levels were calculated assuming a noise-attenuation rate of 6 dB per doubling of distance from the source. Includes up to 10 dB shielding provided by intervening structures (U.S. Department of Housing and Urban Development, 1973).

Construction activities may also result in short-term increases in vehicle traffic along area roadways. Typically, a doubling of vehicle traffic would be required before a significant increase in traffic noise levels would occur. Based on the *Traffic Impact Analysis* prepared for the proposed Project, construction activities would generate up to approximately 80 trips per day (Kimley-Horn and Associates, Inc., 2019a). Additional trips associated with the hauling of materials to and from the site may also be required. Traffic volumes along area roadways typically average several thousand vehicle trips per day. Construction-generated traffic would be dispersed over multiple roadways and would not be anticipated to result in a doubling of vehicle traffic along area roadways. As a result, construction of the proposed Project would not be anticipated to result in a substantial increase in traffic noise levels along area roadways that would adversely impact noise-sensitive land uses. Therefore, impacts would be less than significant.

XIII(b): Result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

The effects of groundborne vibration can vary from no perceptible effects at the lowest levels, low rumbling sounds and detectable vibrations at moderate levels, and slight damage to nearby structures at the highest levels. At the highest levels of vibration, damage to structures is primarily architectural (e.g., loosening and cracking of plaster or stucco coatings) and rarely results in structural damage. The effects of ground vibration are influenced by the duration of the vibration and the distance from the vibration source.

Vibration levels associated with construction equipment likely to be required during project construction are summarized in **Table 3.11-9**. The use of impact pile drivers is not anticipated to be required for the proposed Project.

Table 3.11-9: Representative Construction Equipment Vibration Levels

Equipment	Vibration Level at 25 Feet	
	Peak Particle Velocity (ppv, in/sec)	VdB (micro-inch/second)
Caisson Drilling	0.089	87
Hoe Ram/Pavement Breaker	0.089	87
Large Bulldozers	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozers	0.003	58

ppv = Peak Particle Velocity, in/sec = Inches/Second, VdB = Velocity Decibel
Source: (Federal Transit Administration, 2006; California Department of Transportation, 2013b)

As noted in Section 3.11.2.2, there are no federal, state, or local regulatory standards for groundborne vibration. Groundborne vibration levels were, therefore, evaluated in comparison to Caltrans' recommended criteria (see **Table 3.11-3**). Construction-generated vibration levels would have a potentially significant impact if vibration levels at the nearest structures would exceed the minimum criteria of 0.2 in/sec ppv at fragile structures, 0.3 in/sec ppv at residential dwellings, or 0.5 in/sec ppv at newer buildings, including non-residential structures. This same level corresponds to the level at which vibrations typically become annoying to people in buildings (California Department of Transportation, 2013b).

The nearest existing structures include non-residential structures located adjacent to the Project Site. The nearest residential uses are located approximately 350 feet to the north of the proposed East Park, along South Clarence Street. The nearest noise-sensitive land use in the vicinity of the proposed West Park is a residential development referred to as the "Brick Lofts," which is located approximately 700 feet south of the proposed West Park, near the intersection of Mateo Street and Jesse Street.

As depicted in **Table 3.11-9**, off-road equipment and haul trucks would generate groundborne vibration levels of 0.003 to 0.089 in/sec ppv (58 to 87 micro-inch per second or velocity decibels [VdB]) at 25 feet (Federal Transit Administration, 2006; California Department of Transportation, 2013b). Assuming a distance of 350 feet and a maximum vibration level of 0.089 in/sec ppv, predicted vibration levels would be approximately 0.01 in/sec ppv, or less, at the nearest residential structures. Based on this same vibration level, predicted vibration levels at non-residential land uses located adjacent to the Project Site could exceed 0.05 in/sect ppv when heavy equipment (e.g., dozers) are operated within five feet of existing structures. In addition, haul trucks traveling along area roadways may result in perceptible increases in vibration levels. However, these vibration levels would be transient and instantaneous events, which would be typical of existing vibrations along the roadway network. Based on measurements conducted by Caltrans, on-road heavy-duty trucks would not generate substantial increases in groundborne vibration that would exceed commonly applied criteria for structural damage or annoyance (California Department of Transportation, 2013b).

Groundborne vibration levels associated with off-road equipment and haul trucks would not exceed the minimum commonly applied standards of 0.3 in/sec at the nearest residential structures. However, construction activities occurring within five feet of nearby existing non-residential structures could potentially exceed the threshold of 0.5 in/sec ppv. Therefore, increases in groundborne vibration levels associated with the proposed Project would be considered potentially significant. Therefore, the City is adopting **MM-NOISE-1**, which would reduce groundborne vibration levels to less than significant levels. With implementation of **MM-NOISE-1**, impacts would be less than significant.

3.11.4.5 Operational Impacts

XIII(a): Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

The proposed Project would not include the installation of major stationary noise sources, such as backup power generators. Potential noise impacts would be associated with project-generated vehicle traffic and onsite recreational uses and events (e.g., concerts and performances; festivals; sports games, practices, and tournaments; farmers markets; and large events).

Increased Traffic Noise

Major existing noise sources in the Project Area consist predominantly of vehicle traffic on U.S. 101 and trains traveling along the adjacent UPRR and Metrolink/Amtrak rail lines. No existing nearby stationary sources of noise were identified in the Project Area. For determination of land use compatibility for the proposed Project, transportation noise levels for U.S. 101 and the adjacent rail lines were calculated for future year 2035 conditions. Traffic noise levels for U.S. 101 were quantified using the FHWA roadway noise model based on an estimated year 2035 traffic volume of 173,700 vehicles per day (California Department of Transportation, 2013c). Predicted railroad noise levels were calculated in accordance with the FTA's *Noise and Vibration Impact Assessment* guidelines assuming projected future year 2035 train volumes of 111 freight trains per day and 37 passenger trains per day (Southern California Association of Governments, 2011; Federal Transit Administration, 2006). Projected year 2035 passenger train volumes were calculated based on existing volumes and assuming an average projected future increase of 1.6 passenger trains per 5-year period (Southern California Association of Governments, 2012).

Based on the noise modeling conducted, the U.S. 101 traffic noise levels for future year 2035 along the eastern boundary of the proposed East Park would be approximately 70 dBA CNEL. Along the boundaries of the proposed East Park and Arts Plaza, adjacent to the UPRR and Metrolink/Amtrak railroad corridors, predicted future year 2035 onsite noise levels associated with railroad operations would be approximately 73 dBA CNEL. Predicted onsite noise levels would decrease with increased distance from the adjacent U.S. 101 and railroad corridors. Predicted onsite noise levels would not exceed the City's "normally acceptable" noise level of 75 dBA CNEL (refer to **Table 3.11-2)**. Therefore, impacts would be less than significant and mitigation is not required.

Traffic noise levels for roadway segments primarily affected by the proposed Project were quantified using the FHWA Highway Traffic Noise Prediction model (FHWA-RD-77-108) based on traffic data derived from the *Traffic Impact Analysis* prepared for the proposed Project (Kimley-Horn and Associates, Inc., 2019a). Project-generated traffic volumes include reductions in vehicle traffic associated with the industrial land uses that were removed. Traffic noise levels were evaluated for both existing and future cumulative conditions, with and without implementation of the proposed Project. Predicted existing and future cumulative traffic noise levels and resultant changes in traffic noise levels attributable to the proposed Project are summarized in **Table 3.11-10** and **Table 3.11-11**, respectively. As indicated in the tables, implementation of the proposed Project would not result in a significant increase in traffic noise levels under either existing or future cumulative conditions because of the removed industrial land uses.

Recreational and Event Noise

Onsite noise within the recreation and event areas would be primarily associated with human speech and amplified music. Use of the recreation yard would be limited to the daytime hours. Average sustained sound levels typically associated with human speech generally range from approximately 53 to 75 dBA at one meter for males and from 50 to 71 dBA for females. Instantaneous noise levels, such as shouting, can generate noise levels ranging from approximately 82 to 88 dBA at one meter (Harris, 1998).

The largest events anticipated to be conducted at the Project Site would range from approximately 500 to 5,000 individuals. Predicted maximum levels of crowd noise associated with these various events were calculated assuming that 50 percent of the individuals would be male and 50 percent would be female. It

is anticipated that some onsite events may also include the use of portable amplified sound systems. To be conservative, this analysis included the use of amplified sound systems for the events evaluated. Noise levels associated with amplified sound systems can vary depending on various factors, including crowd size, but generally range from roughly 60 to 70 dBA L_{eq} at 100 feet. To be conservative, noise from amplified sound systems were assumed to be 70 dBA L_{eq} at 100 feet.

Predicted operational noise levels at the nearest noise-sensitive land uses were calculated based on distance from the source and taking into account intervening structures and terrain. Predicted operational noise levels for onsite uses are summarized in **Table 3.11-12**. As depicted, predicted operational noise levels at the nearest noise-sensitive land uses would range from approximately 30 to 58 dBA CNEL. Operational noise levels associated with events at the proposed Arts Plaza Stage in the proposed West Park area would not result in predicted increase in ambient noise levels at the nearest noise-sensitive receiver (i.e., Brick Lofts, LLC). Operational noise levels associated with events in the East Park area would result in increases of up to approximately 2 dBA CNEL at the nearest residential land uses to the north along S. Clarence Street.

Predicted operational noise levels were conservatively calculated assuming that onsite activity noise levels would occur continuously over a fifteen-hour period (7:00 a.m. to 10:00 p.m.). Actual operational times and associated noise levels would likely be less. Operational noise levels at other noise-sensitive land uses, which are generally located east of the Project Site, across U.S. 101, would be largely shielded by intervening terrain and masked by existing traffic noise levels. Therefore, operational noise levels at the nearest residential land uses would not exceed the "normally acceptable" noise level of 65 dBA CNEL. In addition, assuming an average exterior-to-interior noise reduction of 20 dB, which is typical for newer residential dwellings, predicted interior noise levels at these nearest residences would not exceed the commonly applied interior noise level threshold of 45 dBA CNEL. Therefore, impacts would be less than significant, and mitigation is not required.

XIII(b) Result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

Proposed Project operations would not include the use of machinery or equipment that would contribute to excessive groundborne noise or vibration levels. Therefore, impacts would be less than significant and mitigation is not required.

Table 3.11-10: Predicted Traffic Noise Levels – Existing Conditions

Scenario/Roadway Segment	Average-Daily Noise Level (dBA CNEL) at 50 feet from Near-travel-lane Centerline[1]			Potentially Significant?[3]
	Existing Without Project	Existing With Project[2]	Change	
Fourth Street, West of Clarence Street	67.4	67.4	0.0	No
Sixth Street, West of Mateo Street	64.8	64.8	0.0	No
Sixth Street, East of Mateo Street	64.4	64.4	0.0	No
Seventh Street, West of Boyle Avenue	63.2	63.1	-0.1	No
Seventh Street, East of Alameda Street	64.8	64.8	0.0	No
Seventh Street, West of Mateo Street	63.9	63.9	0.0	No
Seventh Street, West of Santa Fe Avenue	63.6	63.6	0.0	No
Seventh Street, East of Santa Fe Avenue	64.5	64.5	0.0	No
Alameda Street, North of Sixth Street	65.4	65.3	-0.1	No
Alameda Street, South of Sixth Street	65.4	65.4	0.0	No
Clarence Street, South of Fourth Street	49.5	49.5	0.0	No
Mateo Street, North of Seventh Street	59.2	59.2	0.0	No
Mateo Street, South of Sixth Street	59.5	59.5	0.0	No
Mateo Street, North of Sixth Street	59.1	59.1	0.0	No
Santa Fe Avenue, South of Fourth Street	62.7	62.7	0.0	No
Santa Fe Avenue, North of Seventh Street	61.4	61.4	0.0	No
Whittier Street, West of Boyle Avenue	64.9	64.9	0.0	No

1. Traffic noise levels were calculated using the FHWA roadway noise prediction model for primarily affected roadways based on traffic volumes derived from the Traffic Impact Analysis prepared for the proposed Project (Kimley-Horn and Associates, Inc., 2019a).
2. Predicted traffic noise levels with implementation of the proposed project include reductions in traffic volumes associated with the industrial land uses that were removed (Kimley-Horn and Associates, Inc., 2019a).
3. Potentially significant impact defined as an increase of 3 dBA, or greater.

Table 3.11-11: Predicted Traffic Noise Levels – Future Cumulative Conditions

Scenario/Roadway Segment	Average-Daily Noise Level (dBA CNEL) at 50 ft. from Near-travel-lane Centerline[1]			Potentially Significant?[3]
	Cumulative Without Project	Cumulative With Project[2]	Change	
Fourth Street, West of Clarence Street	69.5	69.5	0.0	No
Sixth Street, West of Mateo Street	64.9	64.8	-0.1	No
Sixth Street, East of Mateo Street	64.4	64.4	0.0	No
Seventh Street, West of Boyle Avenue	65.6	65.6	0.0	No
Seventh Street, East of Alameda Street	67.4	67.4	0.0	No
Seventh Street, West of Mateo Street	67.0	67.0	0.0	No
Seventh Street, West of Santa Fe Avenue	64.4	64.4	0.0	No
Seventh Street, East of Santa Fe Avenue	66.7	66.7	0.0	No
Alameda Street, North of Sixth Street	68.0	68.0	0.0	No
Alameda Street, South of Sixth Street	68.1	68.1	0.0	No
Clarence Street, South of Fourth Street	49.8	49.8	0.0	No
Mateo Street, North of Seventh Street	64.3	64.3	0.0	No
Mateo Street, South of Sixth Street	65.6	65.6	0.0	No
Mateo Street, North of Sixth Street	65.5	65.5	0.0	No
Santa Fe Avenue, South of Fourth Street	63.8	63.7	-0.1	No
Santa Fe Avenue, North of Seventh Street	65.3	65.3	0.0	No
Whittier Street, West of Boyle Avenue	64.9	64.9	0.0	No

1. Traffic noise levels were calculated using the FHWA roadway noise prediction model for primarily affected roadways based on traffic volumes derived from the Traffic Impact Analysis prepared for the proposed Project (Kimley-Horn and Associates, Inc., 2019a).
2. Predicted traffic noise levels with implementation of the proposed project include reductions in traffic volumes associated with the industrial land uses that were removed (Kimley-Horn and Associates, Inc., 2019a).
3. Potentially significant impact defined as an increase of 3 dBA, or greater.

Table 3.11-12: Predicted Operational Noise Levels for Onsite Uses

Event (Capacity)	Average-daily Noise Level (dBA CNEL)[1]						
	Project Noise Levels	Existing Ambient Conditions	Ambient With Project	Noise Increase With Project	Threshold	Exceeds Threshold/ Significant Increase[4]?	Significant Impact
Predicted Noise Levels at Brick Lofts Residential							
Arts Plaza Stage (1,000)	40	58	58	0	65	No	No
Soccer Field (500)	31	58	58	0	65	No	No
Basketball Courts (500)	30	58	58	0	65	No	No
Flex Area 1 (1,500)	40	58	58	0	65	No	No
Flex Area 2 (1,500)	40	58	58	0	65	No	No
Intermediate Event (2,000)[2]	42	58	58	0	65	No	No
Large Event (3,250)[3]	44	58	58	0	65	No	No
Maximum Event (5,000)[3]	45	58	58	0	65	No	No
Predicted Noise Levels at MFR on South Clarence Street							
Arts Plaza Stage (1,000)	34	62	62	0	65	No	No
Soccer Field (500)	41	62	62	0	65	No	No
Basketball Courts (500)	45	62	62	0	65	No	No
Flex Area 1 (1,500)	51	62	62	0	65	No	No
Flex Area 2 (1,500)	53	62	63	1	65	No	No
Intermediate Event (2,000)[2]	55	62	63	1	65	No	No
Large Event (3,250)[3]	57	62	63	1	65	No	No
Maximum Event (5,000)[3]	58	62	64	2	65	No	No

MFR=Multi-family Residential
1. Average-daily noise levels (in dBA CNEL) were calculated assuming continuous operation for 15 hours daily (7:00 a.m. to 10:00 p.m.).
2. Intermediate event includes events in areas of the flex area and basketball court areas operating simultaneously.
3. Large and maximum events (i.e., 3,250 and 5,000 attendees, respectively) includes events in areas of the flex area, soccer fields, and basketball court areas operating simultaneously.
4. Significant increase defined as an increase of 5 dBA, or greater, in areas 65 dBA CNEL, or less, and 3 dBA, or greater, in areas above 65 dBA CNEL.

3.11.5 Best Management Practices

BMP-NOISE-1: Construction Equipment Requirements

Construction equipment shall be properly maintained and equipped with mufflers.

3.11.6 Mitigation Measures

MM-NOISE-1: Construction-Noise Management Plan

A construction-noise management plan (CNMP) shall be prepared for the proposed Project. The CNMP shall, at a minimum, include the following measures:

- Construction activities shall be restricted outside the hours of 7:00 a.m. to 9:00 p.m. Monday through Friday, and between the hours of 8:00 a.m. to 6:00 p.m. on Saturdays. While the intention is not to conduct work on Sundays, occasional Sunday work may be required to ensure the proposed Project schedule is met. If it is determined that Sunday work is necessary, the proper permits will need to be obtained through the Police Commission. Construction activities shall be prohibited on federal holidays.
- Construction equipment shall be properly maintained and equipped with mufflers.
- Equipment shall be turned off when not in use for an excess of five minutes, except for equipment that requires idling to maintain performance.
- A public liaison shall be appointed for project construction and shall be responsible for addressing public concerns about construction activities, including excessive noise. As needed, the liaison shall determine the cause of the concern (e.g., starting too early, bad muffler) and implement measures to address the concern. The liaison will work directly with the construction contractor to ensure implementation of the noise control plan.
- The liaison will work directly with the construction contractor to ensure implementation of the noise control plan.
- The public shall be notified in advance of the location and dates of construction hours and activities.
- Where necessary, temporary sound barriers shall be installed.
- Signage and notification on where to report construction-generated noise shall be posted on-site and around the construction area, as well as on the Bureau of Engineering website.

- Staging and queuing areas shall be located at the furthest distance possible from nearby residential land uses, as well as any other noise-sensitive land uses identified in the Project Area at the time of construction (e.g., transient lodging, schools, libraries, churches, hospitals, and nursing homes).
- Limit noise/vibration intensive activities occurring within ten feet of existing structures and occupied land uses. Where possible and to the extent locally available, select low-noise/vibration generating equipment when activities occur within ten feet of adjacent existing structures.

3.11.7 Significant Unavoidable Adverse Impacts

With implementation of **MM-NOISE-1** described above, the proposed Project would not result in significant unavoidable adverse impacts.

3.11.8 Cumulative Impacts

With implementation of **MM-NOISE-1**, construction-generated noise levels would be reduced to less than significant. As shown in **Table 3.11-11,** the proposed Project would not result in a significant increase in traffic noise levels under future cumulative conditions. Construction-generated and operational impacts related to vibration would be less than significant.

The proposed development projects listed in **Table 1-1** would be required to comply with all noise and vibration regulations and standards, including those outlined in the City's General Plan Noise Element and Municipal Code. To reduce impacts related to Noise and Vibration, these projects would be required to develop avoidance, minimization, and mitigation measures. Therefore, the proposed Project would not result in cumulatively considerable impacts related to Noise and Vibration.

3.12 Population and Housing

This section describes the affected environment and regulatory setting for Population and Housing related to the Project Area and surrounding area. In addition, this section describes the potential impacts related to Population and Housing that would result from implementation of the proposed Project. As noted in the analysis below, impacts associated with Population and Housing during construction or operation of the proposed Project would be less than significant and no mitigation measures are required.

The information in this section is based on the *Community Impact Assessment* (CIA) prepared for the proposed Project (GPA Consulting, 2019). It is unlikely that community conditions have changed substantially from that described in this technical study. In response to public comments received during the public scoping period for the Notice of Preparation/Initial Study (see **Section 3.12.3.1** below), this EIR includes discussions of development and growth in vicinity to the Project Area and the displacement of homeless people.

3.12.1 Regulatory Setting

A review of the various federal, state, regional, and local government regulatory requirements was conducted to identify regulations that relate to Population and Housing. This section summarizes the various regulatory requirements that are relevant to the proposed Project.

3.12.1.1 State

California Environmental Quality Act

The California Environmental Quality Act (CEQA) requires the analysis of a project's potential to induce growth. CEQA guidelines, Section 15126.2(d), require 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" (California National Resources Agency, 2016).

Under CEQA, growth inducement is not necessarily considered detrimental, beneficial, or environmentally significant. Typically, the growth-inducing potential of a project is considered substantial if it fosters growth or a concentration of population in excess of what is assumed in relevant master plans, land use plans, or in projections made by regional planning agencies.

Substantial growth impacts could be manifested through the provision of infrastructure or service capacity to accommodate growth beyond the levels currently permitted by local or regional plans and policies. In general, growth induced by a project is considered a significant impact if it directly or indirectly affects the ability of agencies to provide needed public services, or if it can be demonstrated that the potential growth significantly affects the environment in some other way.

Assembly Bill 1482

Assembly Bill (AB) 1482, the Tenant Protection Act of 2019, was approved by the Governor on October 8, 2019. AB 1482 is a state law that establishes statewide rent control provisions until January 1, 2030. Under this law, landlords are only able to raise rent for an existent tenant by five percent after inflation.

Previously in the City of Los Angeles, local rent control laws only applied to buildings constructed and occupied prior to October 1, 1978. The passage of AB 1482 applies to tenants living in housing that has been issued a certificate of occupancy 15 years prior.

3.12.1.2 Regional

Southern California Association of Governments Regional Housing Needs Assessment

The *Regional Housing Needs Assessment* (RHNA) quantifies the need for housing in jurisdictions within the Southern California Association of Governments (SCAG) region (Southern California Association of Governments, 2019). SCAG conducts the RHNA every eight years. The most recent assessment was completed in 2012 and covers a projection period between 2013 and 2021. The RHNA guides communities in decisions related to land use planning, resource allocation, and addressing existing and future housing needs based on population, employment, and household growth in the SCAG region.

3.12.1.3 Local

City of Los Angeles General Plan

As required by the State of California, the City's General Plan addresses goals, policies, and standards related to land use, circulation, housing, conservation, open space, noise, and safety (City of Los Angeles, 2017b). To address goals that meet the unique needs of the City, the General Plan also includes elements related to health and wellness, air quality, conservation, and public facilities and services. The City is currently undertaking a comprehensive update to the General Plan.

Housing Element

The Housing Element of the City's General Plan identifies the City's existing housing conditions and needs; establishes goals, objectives, and policies for the City's housing and growth strategy; and describes programs that the City intends to implement to meet the diverse housing needs throughout the City (City of Los Angeles, 2013).

The Housing Element includes goals, objectives, and policies for providing an adequate supply of housing, expanding opportunities and resources for affordable housing, and providing housing and services to meet the needs of the homeless or people at risk of homelessness. The Housing Element also discusses development trends and future growth in the City, identifying opportunities for infill development and redevelopment.

Comprehensive Homeless Strategy

The City developed the *Comprehensive Homeless Strategy* to address homelessness over the next ten years as a joint effort between the City, County, and the Los Angeles Homeless Services Authority (LAHSA). The report provides over 60 recommendations for decision makers with regards to prioritizing and allocating funding, including preventive strategies, case management, and housing services (City of Los Angeles, 2016b). The key areas of the report include the following:

- **No Wrong Door:** Allows homeless people to access housing services through any City agency (e.g., Los Angeles Police Department, Los Angeles Fire Department, and the Public Library System). Each department will receive customized training to engage homeless people and connect them with services.

- **Coordinated Entry System:** Streamlines the process for finding permanent housing with more targeted and cost-effective strategies.
- **Housing:** Includes policies to streamline the planning and zoning process for permanent supportive housing projects, and to increase the investment and use of housing subsidies and vouchers. Suggests the conversion of public and private shelters into bridge and permanent housing options and the expansion of emergency shelters into 24 hour operations.
- **Assistance for the Homeless – El Niño:** Funding provided for inclement weather shelters and other costs associated with El Niño to avoid injury and loss of life.

Executive Directive 16

Executive Directive 16 provides City staff with the resources needed to implement the City's *Comprehensive Homeless Strategy* (Los Angeles Mayor, 2016). The Directive implements a "No Wrong Door" strategy that allows homeless people to have access to City services, regardless of which City Department they seek help from. A budget of $138 million has been allocated to addressing the City's homelessness crisis, with 22% of funding dedicated to expanding services for the homeless provided by LAHSA.

Measure H

Measure H is a County measure that is expected to generate $355 million annually for services to combat homelessness (Los Angeles County, n.d.). Services include programs related to homelessness prevention, foster care and youth, health and mental illness, outreach and case management, re-entry from justice system, and unemployment.

Proposition HHH

The Proposition HHH Permanent Supportive Housing Loan Program is a program that was developed to provide permanent supportive housing for homeless individuals and those at risk of homelessness throughout the City (Los Angeles Housing + Community Investment Department, 2018). The program aims to reduce homelessness by creating safe and affordable housing units and increasing the accessibility of services and treatment programs.

3.12.2 Environmental Setting

The information in the following sections is based on the U.S. Census Bureau's American Community Survey (ACS) 5-Year Estimates. The ACS is an ongoing survey that provides data on various topics that include, but are not limited to population, economy, business, education, employment, families and living arrangements, housing, and income and poverty. The most recent ACS 5-Year Estimates were released in 2018 and include data from 2013-2017 (U.S. Census Bureau, 2018).

Because the ACS 5-Year Estimates provide statistics at the block group level, the environmental setting for Population and Housing is discussed in the context of block groups. The 14 block groups that overlap with or are in proximity to the Project Area, as defined by the U.S. Census Bureau, are listed in **Table 3.12-1** (see **Figure 3.12-1**, Block Groups).

Table 3.12-1: Census Tracts and Block Groups

Census Tract	Block Groups Within Census Tract
Central City North	
Census Tract 2060.31	Block Group 1
	Block Group 2
Boyle Heights	
Census Tract 2035.00	Block Group 1
	Block Group 3
Census Tract 2044.10	Block Group 1
	Block Group 2
Census Tract 2044.20	Block Group 1
	Block Group 2
Census Tract 2046	Block Group 1
	Block Group 2
Census Tract 2060.32	Block Group 1
	Block Group 2
	Block Group 3
Census Tract 2060.50	Block Group 1
Source: (U.S. Census Bureau, 2018)	

3.12.2.1 Regional Population Characteristics

According to the 2019 ACS, populations in the County and the City increased by 3.3 percent and 5.2 percent, respectively, from 2010 to 2019. Populations in the 14 block groups experienced varying levels of decline and growth from 2010 to 2019, ranging from a 28.7 percent decline to a 56.7 percent increase. The average population growth for the 14 block groups was 6.6 percent, which is higher than the population growth in the County and the City (U.S. Census Bureau, 2018).

In the two Central City North block groups, one block group experienced a 56.7 percent increase in population and one block group experienced a 1 percent decline in population, for an average growth of 40 percent. In the twelve Boyle Heights block groups, population growth varied between a 12.2 percent increase in population and a 28.7 percent decline in population, with an average increase of 1.2 percent. Population growth rates for the County, City, and Project Area census tracts are shown in **Table 3.12-2**.

Figure 3.12-1: Block Groups

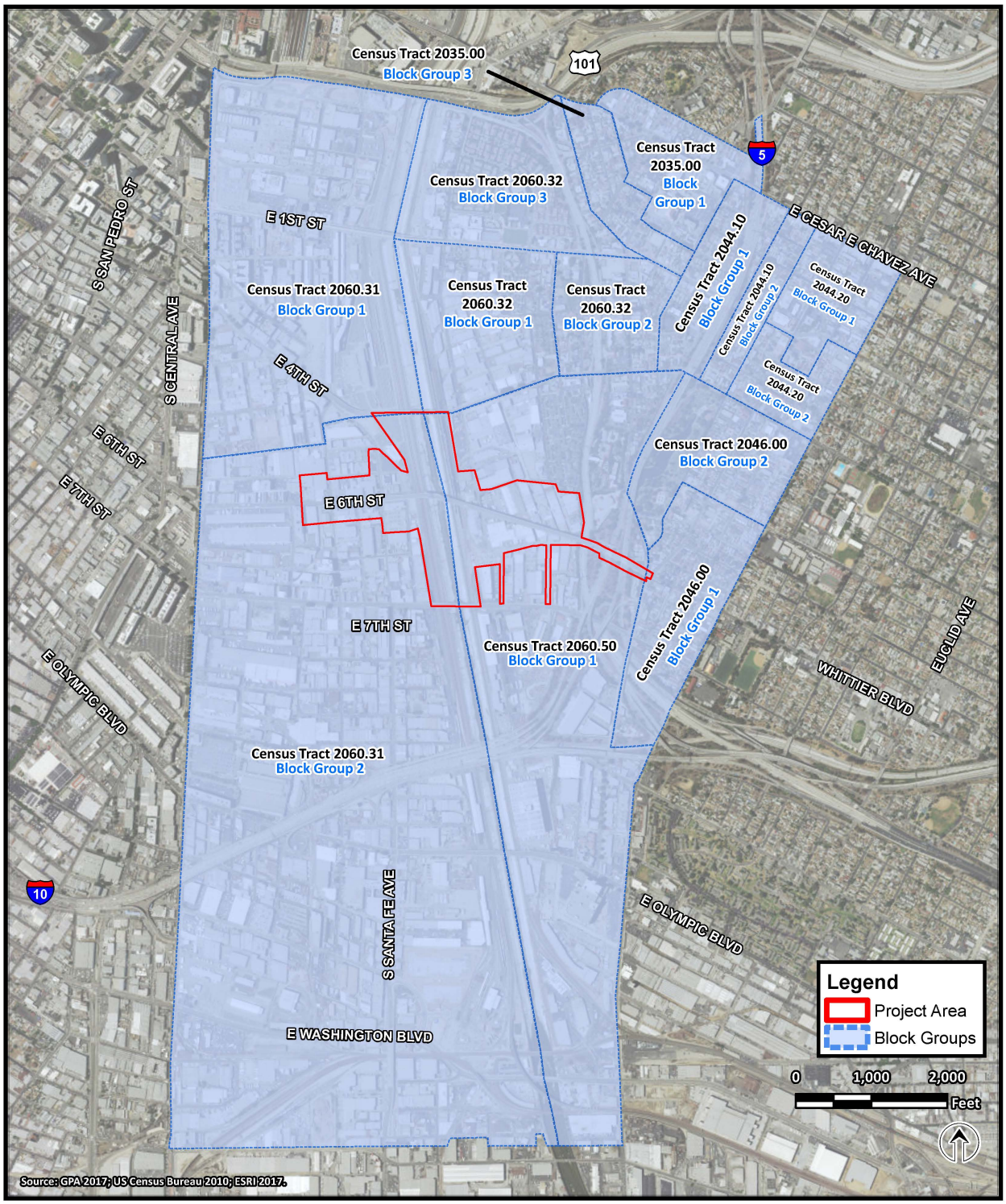


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FIGURE 3.12-1: BLOCK GROUPS
Sixth Street PARC Project

In the County, SCAG forecasts an approximately 13 percent increase in population from 2015 to 2040 (from 10,159,000 to 11,514,000 people). In the City, SCAG forecasts a population growth of approximately 20 percent from 2012 to 2040 (from 3,845,500 to 4,609,400 people) (Southern California Association of Governments, 2016).

From 2010 to 2019, household growth was 2.3 percent in the County and 5 percent in the City. Household growth for the 14 block groups ranged from a 25 percent decline to a 30 percent increase from 2010 to 2017. The average household growth for the 14 block groups was 5 percent, which is higher than the household growth in the County and the City. In the two Central City North block groups, household growth ranged from 28 percent to 30 percent, with an average household growth of 29 percent. In the twelve Boyle Heights block groups, household growth ranged from a 25 percent decline to a 23 percent increase, with an average household growth of 1 percent. Household growth for the County, City, and Project Area census tracts are shown in **Table 3.12-2**.

3.12.2.2 Demographic Characteristics

The City of Los Angeles is characterized as having a high diversity of racial and ethnic groups, with approximately half of the City's population identifying as having Hispanic or Latino origins (Los Angeles County Economic Development Corporation, 2016). In the Central City North block groups, the largest population is White, making up 41 percent of the total population, followed by Asian, making up approximately 31 percent of the total population. In the Boyle Heights block groups, the largest population is Hispanic or Latino making up approximately 84 percent of the total population. The racial and ethnic characteristics of the block groups in Project Area are shown in **Table 3.12-3**.

The majority of the population in the County (43 percent) and the City (45 percent) is between the ages of 25 and 54. In the 14 block groups, the majority of the population is also between the ages of 25 and 54 (45 percent). The population between the ages of 25 and 54 is higher in the Central City North block groups (74.7 percent) than in the Boyle Heights block groups (39.7 percent). Age distributions for the block groups in the Project Area are shown in **Table 3.12-4.**

The percent of households below the poverty level in 2018 was 16 percent for the County and 19 percent for the City. In the Central City North block groups, the percent of households with income below the poverty level in the past 12 months ranges from 13 percent to 20 percent and averages approximately 15 percent, which is lower than the poverty rate for the County (16 percent) and the poverty rate for the City (19 percent). In the Boyle Heights block groups, the percent of households with income below the poverty level in the past 12 months ranges from 21 percent to 50 percent and averages 34 percent, which is higher than the poverty rate for the County (16 percent) and the City (19 percent). Household poverty information is shown in **Table 3.12-5**.

3.12.2.3 Housing Characteristics

From 2014 to 2015, the City experienced a 1.3 percent growth in the total number of housing units and a 0.7 percent decline in owner-occupied housing (Los Angeles City Council Districts, 2017). The percent of vacant homes did not change from 2014 to 2015, comprising 6.3 percent of the housing units. In 2016, renters made up 62 percent of the population and homeowners made up 38 percent of the population (Southern California Association of Governments, 2017).

Table 3.12-2: Projected Population and Household Growth

Study Area	Demographic Characteristic					
	Population			Households		
	2010 Census	2019 ACS 5-Year Estimates	% Change (2010 to 2019)	2010 Census	2019 ACS 5-Year Estimates	% Change (2010 to 2019)
County of Los Angeles	9,758,256	10,081,570	3.3%	3,241,204	3,316,795	2.3%
City of Los Angeles	3,772,486	3,966,936	5.2%	1,318,168	1,383,869	5%
Central City North						
Block Group 1, Census Tract 2060.31	2,088	3,271	56.7%	1,164	1,846	59%
Block Group 2, Census Tract 2060.31	869	860	-1%	499	623	25%
Central City North Block Groups Average (2017)	1,479	1,795	14%	832	1,070	29%
Boyle Heights						
Block Group 1, Census Tract 2035	766	546	-28.7%	236	176	-25%
Block Group 3, Census Tract 2035	1,153	1,135	-1.6%	341	317	-7%
Block Group 1, Census Tract 2044.10	888	977	10%	234	245	5%
Block Group 2, Census Tract 2044.10	1,475	1,598	8.3%	371	382	3%
Block Group 1, Census Tract 2044.20	2,168	2,341	8%	658	679	3%
Block Group 2, Census Tract 2044.20	970	813	-16.2%	250	265	6%
Block Group 1, Census Tract 2046	2,295	2,461	7.2%	587	782	33%
Block Group 2, Census Tract 2046	1,806	1,619	-10.4%	453	426	-6%
Block Group 1, Census Tract 2060.32	1,043	1,072	2.8%	295	308	4%
Block Group 2, Census Tract 2060.32	1,804	1,890	4.8%	709	812	15%

Block Group 3, Census Tract 2060.32	2,428	2,725	12.2%	639	648	1%
Block Group 1, Census Tract 2060.50	2,146	2,031	-5.4%	767	805	5%
Boyle Heights Block Groups Average (2017)	1,579	1,588	-0.7%	462	475	1%
All Block Groups Average	1,564	1,667	6.6%	515	594	15%

Source: U.S. Census Bureau, 2019
Notes: % = Percent

Table 3.12-3: Racial and Ethnic Characteristics

Study Area	Number of Individuals (Percent of Population) based on Race/Ethnicity									
	Total Population	Not Hispanic or Latino							Hispanic or Latino	Total Minority Population
		White Alone	Black or African American Alone	American Indian and Alaska Native Alone	Asian Alone	Native Hawaiian and Other Pacific Islander Alone	Some Other Race Alone	Two or More Races Alone		
County of Los Angeles	10,081,570 (100%)	2,641,770 (26.2%)	790,252 (7.8%)	20,831 (0.2%)	1,454,769 (14.4%)	24,597 (0.2%)	32,413 (0.3%)	215,876 (2.1%)	4,888,434 (48.4%)	7,439,800 (73.8%)
City of Los Angeles	3,966,936 (100%)	1,129,956 (28.5%)	341,750 (8.6%)	6,374 (0.2%)	454,688 (11.5%)	5,103 (0.1%)	14,762 (0.4%)	86,697 (2.2%)	1,922,409 (48.5%)	2,836,980 (71.5%)
Census Tract Block Groups in Project Study Area										
Central City North										
Block Group 1, Census Tract 2060.31	3,271 (100%)	1,123 (34.3%)	193 (6%)	12 (0.4%)	1,214 (37.1%)	88 (2.7%)	0 (0%)	196 (6%)	445 (13.6%)	2,148 (65.7%)
Block Group 2, Census Tract 2060.31	860 (100%)	567 (65.9%)	31 (3.6%)	0 (0%)	52 (6%)	0 (0%)	0 (0%)	57 (6.6%)	153 (17.8%)	293 (34%)

Study Area	Number of Individuals (Percent of Population) based on Race/Ethnicity									
	Total Population	Not Hispanic or Latino							Hispanic or Latino	Total Minority Population
		White Alone	Black or African American Alone	American Indian and Alaska Native Alone	Asian Alone	Native Hawaiian and Other Pacific Islander Alone	Some Other Race Alone	Two or More Races Alone		
Boyle Heights										
Block Group 1, Census Tract 2035	546 (100%)	61 (11.2%)	10 (1.8%)	0 (0%)	149 (27.3%)	0 (0%)	0 (0%)	0 (0%)	326 (59.7%)	485 (88.8%)
Block Group 3, Census Tract 2035	1,135 (100%)	60 (5.3%)	85 (7.5%)	0 (0%)	77 (6.8%)	8 (0.7%)	0 (0%)	0 (0%)	905 (79.7%)	1,075 (94.7%)
Block Group 1, Census Tract 2044.10	977 (100%)	30 (3.1%)	0 (0%)	0 (0%)	35 (3.6%)	0 (0%)	0 (0%)	0 (0%)	912 (93.3%)	947 (97%)
Block Group 2, Census Tract 2044.10	1,598 (100%)	5 (0.3%)	5 (0.3%)	0 (0%)	16 (1%)	0 (0%)	0 (0%)	0 (0%)	1,572 (98.4%)	1,593 (99.7%)

Study Area	Number of Individuals (Percent of Population) based on Race/Ethnicity									
	Total Population	Not Hispanic or Latino							Hispanic or Latino	Total Minority Population
		White Alone	Black or African American Alone	American Indian and Alaska Native Alone	Asian Alone	Native Hawaiian and Other Pacific Islander Alone	Some Other Race Alone	Two or More Races Alone		
Block Group 1, Census Tract 2044.20	2,341 (100%)	15 (0.6%)	144 (6.2%)	0 (0%)	80 (3.4%)	0 (0%)	0 (0%)	20 (0.9%)	2,082 (89%)	2,326 (99.4%)
Block Group 2, Census Tract 2044.20	813 (100%)	24 (3%)	8 (1%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	781 (96.1%)	789 (97%)
Block Group 1, Census Tract 2046	2,461 (100%)	119 (4.8%)	91 (3.7%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	14 (0.6%)	2,237 (90.9%)	2,342 (95.2%)
Block Group 2, Census Tract 2046	1,619 (100%)	42 (2.6%)	0 (0%)	0 (0%)	87 (5.4%)	0 (0%)	11 (0.7%)	0 (0%)	1,479 (91.4%)	1,577 (97.4%)

Study Area	Number of Individuals (Percent of Population) based on Race/Ethnicity									
	Total Population	Not Hispanic or Latino							Hispanic or Latino	Total Minority Population
		White Alone	Black or African American Alone	American Indian and Alaska Native Alone	Asian Alone	Native Hawaiian and Other Pacific Islander Alone	Some Other Race Alone	Two or More Races Alone		
Block Group 1, Census Tract 2060.32	1,072 (100%)	205 (19.1%)	67 (6.3%)	46 (4.3%)	103 (9.6%)	0 (0%)	0 (0%)	0 (0%)	651 (60.7%)	867 (80.9%)
Block Group 2, Census Tract 2060.32	1,890 (100%)	64 (3.4%)	0 (0.0%)	0 (0%)	283 (15%)	0 (0%)	0 (0%)	10 (0.5%)	1,533 (1.1%)	1,826 (96.6%)
Block Group 3, Census Tract 2060.32	2,725 (100%)	93 (3.4%)	58 (2.1%)	0 (0%)	508 (18.6%)	0 (0%)	0 (0%)	0 (0%)	2,066 (75.8%)	2,632 (96.6%)
Block Group 1, Census Tract 2060.50	2,031 (100%)	129 (6.4%)	86 (4.2%)	5 (0.2%)	158 (7.8%)	0 (0%)	13 (0.6%)	23 (1.1%)	1,617 (79.6%)	1,902 (93.6%)

Table 3.12-4: Age Distributions

Study Area	Number of People (Percent of Population) in Age Group						
	Preschool (Under 5 Years)	School (5 to 19 Years)	Young Adults (20 to 24 Years)	Prime Working (25 to 54)	Retirement (55 to 64)	Seniors (65+)	Total[1]
County of Los Angeles	611,485 (6%)	1,915,331 (19%)	756,629 (7%)	4,372,997 (43%)	1,163,870 (12%)	1,264,984 (13%)	10,105,722 (100%)
City of Los Angeles	243,819 (6%)	705,564 (18%)	314,867 (8%)	1,791,835 (45%)	430,853 (11%)	462,838 (12%)	3,949,776 (100%)
Central City North Block Groups	246 (6.1%)	Data Not Available	Data Not Available	3,032 (74.7%)	121 (3%)	170 (4.2%)	4,061 (100%)
Boyle Heights Block Groups	1,652 (8.8%)	4,088 (21.8%)	1,970 (10.5%)	7,429 (39.7%)	1,737 (9.3%)	2,174 (11.6%)	18,718 (100%)
All Block Groups	1,257 (5.5%)	Data Not Available	Data Not Available	10,361 (45.%)	1,507 (6.6%)	2,878 (12.6%)	22,779 (100%)

1. Numbers may not sum to the total due to rounding.
Source: U.S. Census Bureau, 2019

Table 3.12-5: Households with Income below the Poverty Level in 2018

Study Area	Data Source (2016 ACS 5-Year Estimates)		
	Total Households	Households Below Poverty Level	Percent of Households Below Poverty Level
County of Los Angeles	3,295,198	524,489	16%
City of Los Angeles	1,364,227	258,159	19%
Census Tract Block Groups in Project Study Area			
Central City North			
Block Group 1, Census Tract 2060.31	1,492	189	13%
Block Group 2, Census Tract 2060.31	648	128	20%
Central City North Block Group Total	2,140	317	15%
Boyle Heights			
Block Group 1, Census Tract 2035	249	52	21%
Block Group 3, Census Tract 2035	301	84	28%
Block Group 1, Census Tract 2044.10	248	68	27%
Block Group 2, Census Tract 2044.10	384	152	40%
Block Group 1, Census Tract 2044.20	644	319	50%
Block Group 2, Census Tract 2044.20	266	94	35%
Block Group 1, Census Tract 2046	723	271	37%
Block Group 2, Census Tract 2046	430	168	39%
Block Group 1, Census Tract 2060.32	221	56	25%
Block Group 2, Census Tract 2060.32	749	220	29%
Block Group 3, Census Tract 2060.32	668	158	24%
Block Group 1, Census Tract 2060.50	820	277	34%
Boyle Heights Block Group Total	5703	1,919	34%
All Block Group Total	7,843	2,236	29%

Source: U.S. Census Bureau, 2018

The Project Area is within City Council District 14, which includes the eastern portion of Downtown Los Angeles and Boyle Heights, Eagle Rock, El Sereno, Rose Hills, and Highland Park. From 2014 to 2015, Council District 14 experienced a 5.1 percent growth in the total number of housing units. During this same time, Council District 14 experienced a 2.4 percent decline in owner-occupied housing (Los Angeles City Council Districts, 2017). The percent of vacant homes declined by 1.9 percent, comprising 5.6 percent of the housing units (Los Angeles City Council Districts, 2017).

All of the housing units in the Central City North block groups are multi-family units. A majority of the population rents rather than owns, with 71 percent of the population in renter occupied housing units. The average household size varies from 1.28 to 1.85 people. The housing structures were primarily built between 2000 and 2009 (37 percent) or before 1940 (35 percent). The median monthly rent in the Central City North block groups varies by block group, ranging from $2,127 to $2,464, which is higher than the median monthly rent for the City ($1,302) and County ($1,322). The median home value in the Central City North block groups ranges from $589,000 to $945,000, with an average of $767,000, which is higher than the median home value for the City ($549,800) and County ($495,800) (U.S. Census Bureau, 2018).

Nearly all of the housing units (98 percent) in the Boyle Heights block groups are multi-family units. A vast majority of the population rents rather than owns, with 85 percent in renter occupied housing units. The average household size varies from 2.53 to 4.13 people. Many of the housing structures were built in 1939 or earlier (43 percent). The median monthly rent in the Boyle Heights block groups varies by block group, ranging from $670 to $1,189, which is lower than the median monthly rent for the City ($1,302) and County ($1,322). The median home value in the Boyle Heights block groups ranges from $317,300 to $423,500, with an average of $371,258, which is lower than the median home value for the City ($549,800) and County ($495,800) (U.S. Census Bureau, 2018).

3.12.2.4 Homeless Populations

The Project Area census tracts include homeless populations, with 2018 counts shown in **Table 3.12-6**. The 2020 count, which was released in June 2020, did not provide counts at the census tract level. However, the 2020 homeless count for Council District 14 was 7,617 individuals, representing a 7.8 percent increase from 7,068 individuals in 2018 (Los Angeles Homeless Services Authority, 2020).

As part of the Sixth Street Viaduct Replacement Project, any homeless people found within the construction site were vacated and LAHSA was contacted to provide services. At this time, the Project Area is an active construction site, and there are currently no homeless people in the Project Area.

The Project Area is also bordered by Skid Row to the west, which is an area of Downtown Los Angeles that contains one of the largest populations of homeless people in the United States. There are approximately 4,193 homeless people living in Skid Row (Los Angeles Homeless Services Authority, 2018).

The proposed Project may result in the displacement of homeless populations that were previously residing in the Project Area before the construction of the Viaduct Replacement Project. LAHSA, which is an organization that addresses homelessness in the City and County, provided services for displaced homeless populations in the Project Area. Programs include prevention activities, outreach and assessment, emergency shelter, transitional housing, permanent supportive housing, and supportive

services (Los Angeles Homeless Services Authority, 2017). In addition, there are several other resources and facilities in vicinity of the Project Area that aim to serve homeless populations, which are described in **Table 3.12-7.**

Table 3.12-6: Homeless Counts in the Project Area Census Tracts

Census Tract	Number of Homeless Individuals
Central City North	
2060.31	284
Boyle Heights	
2035.00	36
2044.10	9
2044.20	34
2046	15
2060.32	111
2060.50	36

Source: Los Angeles Homeless Services Authority, 2018

Table 3.12-7: Homeless Resources and Facilities

Resource/Facility	Address	Distance from Project Area	Description
Los Angeles Homeless Services Authority	811 Wilshire Blvd #600 in Los Angeles	1.5 miles northwest of the Project Area	A Joint Powers Authority that coordinates housing and services for the homeless in the City and County. LAHSA's primary role is to coordinate the use of Federal and local funding used towards services for homeless people.
United Way of Greater Los Angeles	1150 South Olive Street, Suite T500 in Los Angeles	2 miles west of the Project Area	Organization that aims to help low-income families, students, veterans, and the homeless through enacting policy changes and providing support related to education, financial stability, and health. Launched the Home for Good initiative to work on systems and solutions to end homelessness.
Lamp Community	526 South San Pedro Street in Los Angeles	0.6 miles northwest of the Project Area	Organization that offers permanent housing and health and social services for the most vulnerable homeless individuals, including those with severe mental illness and physical disabilities. Lamp Community serves approximately 3,000 individuals a year through several services sites in Downtown Los Angeles.

Resource/Facility	Address	Distance from Project Area	Description
Los Angeles Mission	303 East 5th Street in Los Angeles	0.7 miles northwest of the Project Area	Organization that provides services to the homeless, which include emergency, recovery and rehabilitation, career, and transition services,
Proyecto Pastoral at Dolores Mission	171 South Gless Street in Los Angeles	0.4 miles northeast of the Project Area	Boyle Heights-based organization that provides support to over 5,000 children and families. Programs include civic engagement, early education centers, food and shelter for the homeless, and youth development.
Jovenes, Inc.	1208 Pleasant Avenue in Los Angeles	0.8 miles northeast of the Project Area	Organization that provides at-risk youth (ages 18-25) with stable housing and other community-based services.
Emmanuel Baptist Rescue Mission	530 East 5th Street in Los Angeles	0.6 miles northwest of the Project Area	Organization that provides meals, shelter, and clothing to the homeless.
Eimago (Union Rescue Mission)	545 South San Pedro Street in Los Angeles	0.7 miles northwest of the Project Area	Organization that provides emergency services, gateway and recovery programs, shelter, health and legal clinics, and learning center.
Weingart Center Association	501 East Sixth Street in Los Angeles	0.7 miles northwest of the Project Area	Organization that provides emergency services, transitional residential programs, health care, substance abuse treatment, community re-entry services, workforce development and education, and other community programs and human services for the homeless.
The Midnight Mission	601 South San Pedro Street in Los Angeles	0.7 miles northwest of the Project Area	Organization that provides emergency services, as well as 12-step recovery, family living, job training, education, and workforce development programs for the homeless.

Source: (GPA Consulting, 2019)

3.12.2.5 Development Trends

The Project Study Area (i.e., Project Area and surrounding half-mile buffer) is developed with transportation infrastructure, commercial and industrial buildings, residential buildings, and government offices. The Project Study Area continues to change due to ongoing redevelopment projects that are being implemented in Los Angeles. In Chapter 1, **Table 1-1** lists current and future development

projects within a half-mile buffer of the Project Area (see **Figure 1-2,** Development Projects) (City of Los Angeles, 2017a; City of Los Angeles, 2019a).

Downtown Los Angeles is comprised of different neighborhoods ranging from the Fashion District to the Downtown Historic Core, and is the hub of the City's Metro Rail transit system. Banks, department stores, and movie palaces at one time drew residents and visitors into the area, but the Downtown District declined economically and suffered a downturn for decades until its recent renaissance starting in the early 2000s.

Since Downtown Los Angeles office markets have migrated west to Bunker Hill and the Financial District, many historic office buildings have been left intact, and were being used for storage or remained vacant. This began to change in 1999, when the Los Angeles City Council passed an adaptive reuse ordinance, making it easier for developers to convert outmoded, vacant office and commercial buildings into renovated lofts and luxury apartment and condo complexes. Because of the Adaptive Reuse Ordinance (Los Angeles Municipal Code Chapter I, Article 2, Section 12.22), which was approved for Downtown Los Angeles in 1999, and extended into the City's other neighborhoods in 2003, the residential population in Downtown Los Angeles has grown substantially, with three times more housing units than in 1999 and additional planned developments that will almost double the existing inventory (Downtown Center Business Improvement District, 2015).

Boyle Heights was initially developed as one of the City's first residential suburbs. Much of the community's infrastructure and housing stock were built in the 1920s (City of Los Angeles, 1998). Over time, industries located west of the LA River began to expand into the Boyle Heights community. As Boyle Heights underwent industrial development in the 1930s and 1940s, the community began to see a demographic shift from European to Mexican immigrants. After construction of several major freeways (I-10, I-5, SR 60, and U.S. 101) in the 1940s and 1960s, the Boyle Heights community became segmented and some of the neighborhoods experienced a reduction in services. Boyle Heights has since seen redevelopment projects such as transportation infrastructure improvements and transit extensions, housing developments, and economic revitalization. In response to proposed redevelopment projects, the community has expressed concerns regarding displacement, gentrification, and higher housing costs.

The City is in the process of updating the Central City North Community Plan (as part of the Downtown Community Plan) and Boyle Heights Community Plan in an effort to accommodate future growth projections and respond to growth and development since the plans were last adopted (City of Los Angeles, 2017b). The City is also undertaking a comprehensive update to the General Plan in order to address the changing needs of LA's diverse population and geography.

In response to development trends, the City has also proposed and adopted ordinances, policies, and programs to facilitate the development of housing for residents of all income levels (City of Los Angeles, 2019c). The following ordinances facilitate housing development to meet the City's housing needs include:

- **Affordable Housing Linkage Fee:** The City Council adopted the Affordable Housing Linkage Fee Ordinance (No. 185342) on December 13, 2017. The Affordable Housing Linkage Fee is an initiative that includes the investigation of sources of local funds to be used for building affordable housing for low-income residents. Of interest are collecting fees from commercial and market-rate residential development.

- **Transit Oriented Communities Affordable Housing Incentive Program:** This program, which became effective on September 22, 2017, provides incentives and requirements for including affordable units within all new residential projects.
- **Density Bonus Program:** The Density Bonus Program is a state-mandated program that was approved by the City on February 28, 2008. The program allows housing developers to build a greater number of units beyond allowable density provided they meet certain citywide housing needs (e.g., allocating a percentage of affordable housing units, providing senior housing, or donating land for housing).
- **Small Lot Ordinance:** The Small Lot Ordinance (No. 176354) was established in 2005. This ordinance allows underutilized land in multi-family and commercial areas to be subdivided for small lot homes.
- **Residential Accessory Services (RAS) Zones:** RAS zones, adopted by the City Council in December 2002, allow exceptions (e.g., increased floor area/height and reduced setback requirements) for residential or mixed-use projects constructed within commercial and transportation corridors.
- **Adaptive Reuse Ordinance:** This ordinance, approved in 1999 for downtown Los Angeles, waives building and zoning requirements for developments that convert underutilized buildings, including historic buildings, into housing.

Many of these ordinances aim to encourage or incentivize the development of affordable housing units. In addition, the City has introduced policies to protect and/or facilitate the development of special needs housing (i.e., homeless shelters, eldercare facilities, residential hotels, and equal access housing for the disabled (City of Los Angeles, 2019c).

3.12.3 Environmental Impact Analysis

3.12.3.1 Methodology

Potential significant impacts associated with the proposed Project were determined based on a review of the regional population, demographic, and housing characteristics from the American Community Survey. In addition, a review of homeless populations was completed based on the homeless counts conducted by LAHSA. Development trends of the Project Area and surrounding area were assessed based on the Community Plans for these areas.

During the public scoping period for the Notice of Preparation/Initial Study, several public comments addressing Population and Housing were received. The comments are summarized in **Table 3.12-8** below and are discussed in more detail in the following sections.

In response to the comments in **Table 3.12-8** regarding displacement of the homeless, a discussion of homeless populations was included in Section 3.12.2.4. Please see Section 3.12.2.5 for discussions of development and growth.

Many factors contribute to the character and economy of a neighborhood, including its demographics, businesses, local land use regulations, and the built and natural environments. The City's investments in better infrastructure, open spaces, and other public amenities, such as revitalization of the LA River, also

play a role in improving or preserving local economies and quality of life. As higher-income people become interested in living and working in urban areas, gentrification has affected neighborhoods across the City. (City of Los Angeles, 2016c)

Table 3.12-8: Public Concerns

Type of Public Concern	Details
Development and Growth	Commenter expressed concerns about impacts related to increased rent and gentrification, specifically on the east side of the Project.
	Commenter expressed interest in preserving existing affordable housing and small businesses on the east side of the LA River. Concerns regarding displacement and gentrification were expressed.
Displacement	Commenter expressed concerns regarding impacts related to homelessness. The commenter requested that the homeless demographic be discussed in the environmental document and Project-specific mitigation measures be considered.

Source: GPA Consulting, 2019

Land and building values adjust to changing demographics, preferences, and levels of investment, with increasing values leading to economic benefits for landowners, but potential displacement of existing renters. Residential tenants can face pressure to vacate leased properties. City regulations do not currently offer protections for renters residing in single-family homes, but many residents in multi-family housing are protected by the Rent Stabilization Ordinance (RSO). (City of Los Angeles, 2016c)

The RSO applies to any property with two or more units built before 1978, representing approximately 80 percent of the City's multi-family rental housing. The ordinance limits annual rent increases to approximately three percent, prohibits evictions without just cause, provides for significant relocation payments under some circumstances, and offers a number of other protections to tenants. (City of Los Angeles, 2016c)

In the short-term, the City is focused on ensuring that landlords and tenants are aware of their rights and responsibilities under the RSO and that the ordinance is being adequately enforced. In the long-term, the City is actively building its Affordable Housing Trust Fund, evaluating land use tools that can help create and preserve affordable housing, and providing RSO exemptions for newly constructed housing that includes at least 20 percent affordable housing units (Ordinance No. 184873). (City of Los Angeles, 2016c)

3.12.3.2 Screening Analysis

Several impacts and corresponding thresholds of significance in the following section were eliminated from further analysis in this EIR. Topics were eliminated if the IS for the proposed Project concluded there would be "No Impact," or if impacts were identified to be "Less Than Significant… and will not be discussed further in the EIR." Therefore, only the topics described in the section below were determined to require further analysis in this EIR. A copy of the Initial Study, which contains the eliminated topics, is provided in **Appendix A**.

3.12.3.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and the *L.A. CEQA Thresholds Guide*, the proposed Project would have a significant impact on Population and Housing if it would:

XIV(a) Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure).

J.1 Population and Housing Growth. The determination of significance shall be made on a case-by-case basis, considering the following factors:

- The degree to which the project would cause growth (i.e., new housing or employment generators) or accelerate development in an undeveloped area that exceeds projected/ planned levels for the year of project occupancy/buildout, and that would result in an adverse physical change in the environment;
- Whether the project would introduce unplanned infrastructure that was not previously evaluated in the adopted Community Plan or General Plan; and
- The extent to which growth would occur without implementation of the project.

3.12.3.4 Construction Impacts

XIV(a): Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure).

During construction of the proposed Project, new homes and businesses would not be established. Construction workers would likely be hired from the local area and commute to the job site on a daily basis, rather than relocate from more distant areas. Construction workers would be present for a temporary period of time and are not expected to contribute to unplanned population growth in the Project Area.

Construction activities for the proposed Project would be limited to the construction site in a heavily developed industrial and commercial area and would not result in the extension of roads or other infrastructure to undeveloped areas. Direct and indirect unplanned population growth from construction of the proposed Project is not anticipated; therefore, impacts would be less than significant, and no mitigation is required.

3.12.3.5 Operational Impacts

XIV(a): Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure).

Operation of the proposed Project does not include the establishment of new homes. The proposed Project may include one or more office/community/concession building(s); however, there are limited business sites available within the proposed park. Therefore, the proposed Project is not expected to directly result in substantial unplanned population growth in the Project Area.

The proposed Project includes transportation infrastructure, including pedestrian and bicycle paths that would provide connections to the existing street network and the Los Angeles River. Because the areas surrounding the Los Angeles River are already highly developed, the proposed Project would not result in the extension of roads or infrastructure to undeveloped areas. Therefore, the proposed Project is not expected to result in indirect unplanned growth.

(i) The degree to which the project would cause growth (i.e., new housing or employment generators) or accelerate development in an undeveloped area that exceeds projected/planned levels for the year of project occupancy/buildout, and that would result in an adverse physical change in the environment.

The proposed Project does not include the development of housing and is not expected to contribute to population growth. In addition, the proposed Project would only offer limited opportunities for employment. Any employment opportunities resulting from the proposed Project could be offered to people already residing or working in the area. Therefore, the proposed Project is not expected to result in a substantial increase in in-migrants (i.e., people relocating into the area from some other more distant location).

The proposed Project would attract visitors to the Project Area because of the proposed public amenities (e.g., public gathering/assembly areas, recreational courts and fields, etc.), which could attract developers and businesses to the Project Area. This could potentially induce population, housing, and employment growth in the Project Area, thereby accelerating development in the surrounding communities of Central City North and Boyle Heights. However, the Project Area is already densely developed, and there are relatively few business sites available. Opportunities for development would be primarily limited to infill development (i.e., the development of vacant or under-used parcels in existing urban areas). In addition, future proposed developments would be evaluated on a case-by-case basis on their impacts related to growth, development, and other physical changes. Therefore, adverse physical changes in the environment are not anticipated. Impacts would be less than significant, and no mitigation is required.

(ii) Whether the project would introduce unplanned infrastructure that was not previously evaluated in the adopted Community Plan or General Plan.

The proposed Project would introduce bicycle and pedestrian infrastructure within the park limits. This infrastructure would be designed to connect with the greater network of bicycle and pedestrian facilities in the surrounding communities and along the LA River.

The proposed Project would be consistent with the Los Angeles River Revitalization Master Plan (LARRMP), which includes a vision for the development of bicycle and pedestrian paths providing access along the Los Angeles River (City of Los Angeles, 2007). The 2010 Bicycle Plan incorporates the recommendations outlined in the LARRMP, with the goal of providing a continuous bicycle path along the west and south sides of the LA River (City of Los Angeles, 2011). The 2010 Bicycle Plan also incorporates LARRMP recommendations for identifying connections to the LA River to enhance access to existing and future segments to the LA River bicycle and pedestrian path. In addition, the proposed Project would be consistent with the City's Mobility Plan 2035. One of the main objectives of the Mobility Plan is to complete bicycle path segments along the LA River to form the Los Angeles River Greenway

Trail, which is an effort to complete a bicycle path along the entire 32 mile stretch of the LA River by 2020 (City of Los Angeles, 2016a).

Though the proposed Project is not included in the existing Community Plans for Boyle Heights and Central City North, the Community Plans have not been updated since 1998 and 2000, respectively, and are currently being revised. The Downtown Community Plan, also referred to as DTLA 2040, is a proposed updated to the Central City and Central City North Community Plan (City of Los Angeles, 2019b).

Because the proposed Project is consistent with the City's goals for interconnected pedestrian and bicycle infrastructure along the LA River, impacts would be less than significant, and no mitigation is required.

(iii) The extent to which growth would occur without implementation of the project.

Though population growth varies among block groups in the Project Area, SCAG forecasts indicate that growth will occur for the County and City overall. As discussed in Section 3.12.2.1 above, SCAG projections forecast a 13 percent increase in the County's population and a 20 percent increase in the City's population from 2012 to 2040 (Southern California Association of Governments, 2016).

Because the proposed Project does not include the development of housing, the proposed Project is not expected to contribute to SCAG's projected population growth. As discussed above, the proposed Project would offer limited opportunities for employment. Any employment opportunities resulting from the proposed Project could be offered to people already residing or working in the area. Therefore, the proposed Project is not expected to result in a substantial increase in in-migrants (i.e., people relocating into the area from some other more distant location).

The proposed Project would attract visitors to the Project Area because of the proposed public amenities (e.g., public gathering/assembly areas, recreational courts and fields, etc.), which could potentially spur population, housing, and employment growth in the surrounding communities of Central City North and Boyle Heights. Proposed housing developments would be evaluated on a case-by-case basis to determine their potential contributions to population growth in the surrounding area. To minimize effects on existing residents in proximity to the Project Area (i.e., higher rents and displacement), the City has adopted ordinances and policies that facilitate the development of housing for residents of all income levels and address the City's housing needs. As discussed in Section 3.12.2.5, plans to facilitate housing development include, but are not limited to, a mixed income housing ordinance, density bonus program, adaptive reuse ordinance, and zoning changes (City of Los Angeles, 2019c). Many of these plans aim to encourage or incentivize the development of affordable housing units to combat the potential for displacement of low-income communities caused by population growth. In addition, the rent increase caps provisioned in California AB 1482 in the immediate proposed Project's vicinity would help minimize the potential effects of higher rents on existing residents in proximity to the Project Area.

As discussed above, the Project Area is already densely developed, and there are relatively few business sites available. Opportunities for development would be primarily limited to infill development (i.e., the development of vacant or under-used parcels in existing urban areas). Proposed developments would be evaluated on a case-by-case basis to determine their potential contributions to growth in the surrounding area. In addition, proposed developments would be evaluated based on their consistency with the goals, policies, and objectives of the surrounding communities and the City as a whole.

Though implementation of the proposed Project could induce a small amount of growth, the proposed Project does not have the potential to result in growth that would otherwise not occur. The City is in the process of updating elements of the General Plan, including the Community Plans for Central City North and Boyle Heights. These updates are intended to ensure that the City meets the demands associated with population, housing, and employment growth. Therefore, impacts would be less than significant, and no mitigation is required.

3.12.4 Best Management Practices

There are no Best Management Practices related to Population and Housing.

3.12.5 Mitigation Measures

Impacts related to Population and Housing would be less than significant; therefore, no mitigation measures are required.

3.12.6 Significant Unavoidable Adverse Impacts

There are no significant unavoidable adverse impacts on Population and Housing from construction and operation of the proposed Project.

3.12.7 Cumulative Impacts

The cumulative setting for Population and Housing is the Project Study Area, which includes a half-mile buffer around the Project Area within the Central City North and Boyle Heights Community Plan areas. Because many of the proposed development projects listed in **Table 1-1** include residential, live/work units, and public transportation projects, there is potential for direct growth to occur within the Project Study Area. As discussed above, the Project Study Area is already densely developed, and opportunities for development would be primarily limited to infill development. Proposed developments would be evaluated on a case-by-case basis to determine their potential contributions to growth in the surrounding area. In addition, proposed developments would be evaluated based on their consistency with the City's General Plan and other local and regional plans and policies.

The City is in the process of updating local plans to address growth in the region. In addition, as discussed in Section 3.12.2.5, the City has adopted ordinances and policies to facilitate the development of affordable housing to address the City's housing needs. Therefore, cumulative impacts related to Population and Housing resulting from housing development projects would be less than significant.

Infrastructure projects listed in **Table 1-1** include improvements to existing roadways and development of pedestrian and bike paths. Because the Project Study Area is already densely developed, indirect growth from the extension of roads or infrastructure to undeveloped areas is not expected. In addition, transportation infrastructure projects would be evaluated based on their consistency with the City's local plans (e.g., General Plan, Los Angeles River Revitalization Master Plan, Mobility Plan 2035, and 2010 Bicycle Plan). Therefore, proposed infrastructure projects are not expected to result in indirect growth in the Project Study Area.

Because the proposed Project and other proposed development projects would be required to comply with applicable plans and policies, the proposed Project would not result in cumulative impacts related to Population and Housing.

3.13 Public Services

This section describes the affected environment and regulatory setting for public services related to the Project Area and surrounding area. In addition, this section describes the potential impacts related to public services that would result from implementation of the proposed Project. As noted in the analysis below, impacts associated with Public Services during construction or operation of the proposed Project would be less than significant with mitigation.

Impacts related to Public Services may extend beyond the Project Area (i.e., the area of direct impacts resulting from construction and operation of the proposed Project). Therefore, the discussion of the affected environment and environmental impacts related to Public Services is based on the Project Study Area, which includes the Project Area and a surrounding half-mile buffer.

The information in this section is based on the *Community Impact Assessment* (GPA Consulting, 2019) and the *Traffic Impact Analysis* (Kimley-Horn and Associates, Inc., 2019) prepared for the proposed Project. It is unlikely that community conditions and traffic conditions have changed substantially from that described in these technical studies.

3.13.1 Regulatory Setting

A review of the various federal, state, regional, and local government regulatory requirements was conducted to identify regulations that relate to parks, recreational facilities, and open spaces. This section summarizes the various regulatory requirements that are relevant to the proposed Project.

3.13.1.1 City of Los Angeles General Plan

As required by the State of California, the City's General Plan addresses goals, policies, and standards related to land use, circulation, housing, conservation, open space, noise, and safety (City of Los Angeles, 2017). To address goals that meet the unique needs of the City, the General Plan also includes elements related to health and wellness, air quality, historic preservation and cultural resources, and public facilities and services. Several of the General Plan elements are currently undergoing revision. The General Plan elements that pertain to Public Services are described in more detail in the following sections.

Safety Element

The Safety Element of the City's General Plan addresses the protection of people from risks associated with natural disasters (City of Los Angeles, 1996). The Safety Element includes goals, objectives, and policies that guide the City's Emergency Operations Organization, which is the City's department responsible for emergency planning, training, and mitigation, as well as response and recovery operations. The Safety Element includes standards related to fire protection and prevention, such as standards for the location and expansion of fire facilities, access to structures and clearances around structures, and minimum road widths. The applicable goals, objectives, and policies are described below:

- **Goal 2**: A city that responds with the maximum feasible speed and efficiency to disaster events so as to minimize injury, loss of life, property damage and disruption of the social and economic life of the City and its immediate environs.

- **Objective 2.1**: Develop and implement comprehensive emergency response plans and programs that are integrated with each other and with the City's comprehensive hazard mitigation and recovery plans and programs.
    - **Policy 2.16**: Standards/fire. Continue to maintain, enforce and upgrade requirements, procedures and standards to facilitate more effective fire suppression. [All peak load water and other standards, code requirements (including minimum road widths, access, clearances around structures) and other requirements or procedures related to fire suppression implement this policy.]

      The Fire Department and/or appropriate City agencies shall revise regulations or procedures to include the establishment of minimum standards for location and expansion of fire facilities, based upon fire flow requirements, intensity and type of land use, life hazard, occupancy and degree of hazard so as to provide adequate fire and emergency medical event response. At a minimum, site selection criteria should include the following standards which were contained in the 1979 General Plan Fire Protection and Prevention Plan:

        - Fire stations should be located along improved major or secondary highways. If, in a given service areas, the only available site is on a local street, the site must be on a street which leads directly to an improved major or secondary highway.
        - Fire station properties should be situated so as to provide drive-thru capability for heavy fire apparatus.
        - If a fire station site is on the side of a street or highway where the flow of traffic is toward a signalized intersection, the site should be at least 200 feet from that intersection in order to avoid blockage during ingress and egress.
        - The total number of companies which would be available for dispatch to first alarms would vary with the required fire flow and distance as follows: (a) less than 2,000 gallons per minute (gpm). would require not less than 2 engine companies and 1 truck company; (b) 2,000 but less than 4,500 gpm., not less than 2 or 3 engine companies and 1 or 2 truck companies; and (c) 4,500 or more gpm., not less than 3 engine companies and 2 truck companies.

Framework Element

The General Plan Framework Element is a strategy for long-term growth that guides updates to the community plan and its elements, as required by California State law (Government Code Section 65300) (City of Los Angeles, 1996). The Framework Element describes the primary police and law enforcement services, as well as the fire prevention, fire protection, and Emergency Medical Service for the City. In addition, the Framework Element includes goals for ensuring that every neighborhood in the City has the necessary police protection and fire services to meet existing and future needs as well as ensure public safety. The goals, objectives, and policies in the Framework Element that pertain to police services, fire services, and recreation and park facilities include:

Police

- **Goal 9I:** Every neighborhood in the City has the necessary police services, facilities, equipment, and manpower required to provide for the public safety needs of that neighborhood.
    - **Objective 9.13:** Monitor and forecast demand for existing and projected police service and facilities.
        - **Policy 9.13.1:** Monitor and report police statistics, as appropriate, and population projections for the purpose of evaluating police service based on existing and future needs.
    - **Objective 9.14:** Protect the public and provide adequate police services, facilities, equipment and personnel to meet existing and future needs.
        - **Policy 9.14.1:** Work with the Police Department to maintain standards for the appropriate number of sworn police officers to serve the needs of residents, businesses, and industries.
        - **Policy 9.14.2:** Support the provision of additional sworn police offers to meet the safety needs of the City.
        - **Policy 9.14.3:** Pursue State, Federal, and other non-conventional funding sources to expand the number of sworn police officers.
        - **Policy 9.14.4:** Complete all funded capital facilities in as short a time as possible.
        - **Policy 9.14.5:** Identify neighborhoods in Los Angeles where facilities are needed to provide adequate police protection.
        - **Policy 9.14.6:** Minimize the processing required to establish needed facilities and, if necessary, modify facility standards to utilize existing available structures for this purpose.
        - **Policy 9.14.7:** Participate fully in the planning of activities that assist in defensible space design and utilize the most current law enforcement technology affecting physical development.
    - **Objective 9.15:** Provide for adequate public safety in emergency situations.
        - **Policy 9.15.1:** Maintain mutual assistance agreements with local law enforcement agencies, State law enforcement agencies, and the National Guard to provide for public safety in the event of emergency situations.

Fire

- **Goal 9J:** Every neighborhood has the necessary level of fire protection service, emergency medical service (EMS) and infrastructure.
    - **Objective 9.16:** Monitor and forecast demand for existing and projected fire facilities and service.

- **Policy 9.16.1:** Collect appropriate fire and population development statistics for the purpose of evaluating fire service needs based on existing and future conditions.

- **Objective 9.17:** Assure that all areas of the City have the highest level of fire protection and EMS, at the lowest possible cost, to meet existing and future demand.
  - **Policy 9.17.1:** Complete all currently funded and, as feasible, programmed fire service capital improvements by the year 2010.
  - **Policy 9.17.2:** Identify areas of the City with deficient fire facilities and/or service and prioritize the order in which these areas should be upgraded based on established fire protection standards.
  - **Policy 9.17.3:** Develop an acquisition strategy for fire station sites in areas deficient in fire facilities.
  - **Policy 9.17.4:** Consider the Fire Department's concerns and, where feasible adhere to them, regarding the quality of the area's fire protection and emergency medical services when developing general plan amendments and zone changes or considering discretionary land use permits.
- **Objective 9.18:** Phase the development of new fire facilities with growth.
  - **Policy 9.18.1:** Engage in fire station development advance planning, acknowledging the amount of time needed to fund and construct these facilities.
- **Objective 9.19:** Maintain the Los Angeles Fire Department's ability to assure public safety in emergency situations.
  - **Policy 9.19.1:** Maintain mutual aid or mutual assistance agreements with local fire departments to ensure an adequate response in the event of a major earthquake, wildfire, urban fire, fire in areas with substandard fire protection, or other fire emergencies.
  - **Policy 9.19.3:** Maintain the continued involvement of the Fire Department in the preparation of contingency plans for emergencies and disasters.

Recreation and Parks

- **Goal 9L:** Sufficient and accessible parkland and recreation opportunities in every neighborhood of the City, which gives all residents the opportunity to enjoy green spaces, athletic activities, social activities, and passive recreation.
  - **Objective 9.22:** Monitor and forecast demand for existing and projected recreation and park facilities and programs.
    - **Policy 9.22.1:** Monitor and report appropriate park and recreation statistics and compare with population projections and demand to identify the existing and future recreation and parks needs of the City.
  - **Objective 9.23:** Complete all currently programmed parks and recreation capital improvements by the year 2010, contingent on available funding.

- **Policy 9.23.1:** Develop a strategy to purchase and develop land for parks, which is consistent with the appropriate open space policies found in Chapter 6: Open Space and Conservation.
- **Policy 9.23.2:** Prioritize the implementation of recreation and park projects in areas of the City with the greatest existing deficiencies.
- **Policy 9.23.3:** Establish joint-use agreements with the Los Angeles Unified School District and other public and private entities which could contribute to the availability of recreation opportunities.
- **Policy 9.23.4:** Pursue resources to clean-up land that could be used by the City for public recreation.
- **Policy 9.23.5:** Re-evaluate the current park standards and develop modified standards which recognize urban parks, including multi-level facilities, smaller sites, more intense use of land, public/private partnerships and so on.
- **Policy 9.23.6:** Identify and purchase, whenever possible, sites in every neighborhood, center, and mixed-use boulevard, and maximize opportunities for the development and/or use of public places and open spaces on private land in targeted growth areas.
- **Policy 9.23.7:** Establish guidelines for developing non-traditional public park spaces like community gardens, farmer's markets, and public plazas.
- **Policy 9.23.8:** Prepare an update of the General Plan Public Facilities and Services Element based on the new Los Angeles Department of Recreation and Parks standards by 2005.

- **Objective 9.24:** Phase recreational programming and park development with growth.
  - **Policy 9.24.1:** Phase the development of new programs and facilities to accommodate projected growth.
  - **Policy 9.24.2:** Develop Capital Improvement Programs that take into account the City's forecasted growth patterns and current deficiencies.

3.13.1.2 City of Los Angeles Municipal Code

Los Angeles Fire Code

The 2017 Los Angeles Fire Code is part of the City's Municipal Code (Chapter V, Article 7), and incorporates the requirements outlined in the California Fire Code, as well as City amendments. The Fire Code includes, but is not limited to, requirements regarding fire safety during construction, emergency response, fire protection, and materials for existing and proposed buildings (City of Los Angeles, 2017). Division 9 of the Fire Code provides requirements related to fire department access, and response distance and fire-flow requirements for different land uses.

Los Angeles Building Code

The Los Angeles Building Code is a component of the City's Municipal Code (Chapter IX, Article 1), which provides regulations for the design, construction, quality of materials, use and occupancy, location, and

maintenance of all buildings and structures. The Building Code includes guidelines for fire-resistant materials and construction, as well as requirements for fire-protection systems. In addition, the Building Code provides safety guidelines, including requirements for exterior illumination and safeguards during construction.

3.13.2 Environmental Setting

3.13.2.1 Police Protection

Police protection services and law enforcement are provided by the Los Angeles Police Department (LAPD), which operates 18 stations throughout the City within the Central, South, West, and Valley Bureaus. The Project Area is within the Central Bureau and is served by the Central Division of the LAPD to the west of the Los Angeles River, and the Hollenbeck Division to the east of the Los Angeles River. There are no police stations within the Project Study Area. There are two police stations located just outside the half-mile buffer area, which are listed in **Table 3.13-1** (see **Figure 3.13-1**, Emergency Services)**.**

Table 3.13-1: Police Stations

Location	Property Name	Address	Distance from Project Area
PD-1	Los Angeles Police Department Central Community Police Station	215 East Sixth Street in Los Angeles	Approximately 0.8 miles northwest of Project Area
PD-2	Los Angeles Police Department Hollenbeck Community Police Station	211 East First Street in Los Angeles	Approximately 0.9 miles northwest of Project Area

Source: (GPA Consulting, 2019)

The Project Area experiences minor delays in emergency response times due to the existing construction site and closure of the Viaduct as part of the Viaduct Replacement Project. As part of the Viaduct Replacement Project, a Work Area Traffic Control Plan and Traffic Management Plan were developed to provide alternate traffic detour routes, construction materials hauling routes, bus stops, transit routes and operation hours, pedestrian routes, and residential and commercial access routes for the construction period. Because the Project Area is currently a construction site with restricted public access, existing LAPD service demands are minimal.

The Park Ranger Division oversees the safety and preservation of parks within the City's Department of Recreation and Parks (RAP) system. Park rangers are sworn law enforcement officers and certified firefighters with credentials to fight fires and administer basic first aid (City of Los Angeles Department of Recreation and Parks, 2019). Park Rangers patrol City parks using a variety of different methods such as vehicle patrols, mounted unit patrols (i.e., horseback), and foot-beats (i.e., foot or bicycle). Currently, the Park Ranger Division provides service to primarily Griffith Park, Runyon Canyon Park, Elysian Park, Hansen Dam Recreation Area, Ernest E. Debs Regional Park, and Ken Malloy Harbor Regional Park. In

addition to the park ranger system, an existing memorandum of understanding (MOU) between LAPD and RAP requires LAPD to patrol all parks in the RAP system.

3.13.2.2 Fire Protection

The Los Angeles City Fire Department (LAFD) provides fire prevention and suppression services, as well as emergency medical services, within the City. The LAFD operates three divisions, which include 18 battalions and over 100 fire stations. The Project Area is served by Battalion 1 of the Central Bureau of the LAFD. There are no fire stations within the Project Study Area. There are four fire stations located just outside of the Project Study Area, which are listed in **Table 3.13-2** (see **Figure 3.13-1**, Emergency Services)**.** The average operational response times for emergencies in 2017 are also included on **Table 3.13-2** (Los Angeles Fire Department, 2017)**.**

As discussed in Section 3.13.2.1, the Project Area experiences minor delays in emergency response times due to the existing construction site and closure of the Viaduct as part of the Viaduct Replacement Project. Because the Project Area is currently a construction site for the Viaduct Replacement Project, construction activities are required to incorporate LAFD recommendations and comply with applicable standards and permits, including Fire Code requirements regarding fire department access, response distances, and fire-flow. Therefore, existing fire protection demands are minimal.

Table 3.13-2: Fire Stations

Location	Property Name	Address	Distance From Project Area	2017 Response Times (minutes, seconds)
FD-1	Los Angeles Fire Department Station 4	450 East Temple Street in Los Angeles	Approximately 0.6 miles northwest of Project Area	EMS: 6 mins, 19 secs Non-EMS: 6 mins, 3 secs Critical ALS: 5 mins, 30 secs Structure Fire: 4 mins, 24 secs
FD-2	Los Angeles Fire Department Station 2	1962 East Cesar Chavez Avenue in Los Angeles	Approximately 0.9 miles northeast of Project Area	EMS: 6 mins, 24 secs Non-EMS: 6 mins, 11 secs Critical ALS: 5 mins, 33 secs Structure Fire: 4 mins, 40 secs
FD-3	Los Angeles Fire Department Station 25	2927 Whittier Boulevard in Los Angeles	Approximately 0.7 miles southeast of Project Area	EMS: 6 mins, 46 secs Non-EMS: 6 mins, 29 secs Critical ALS: 6 mins, 8 secs Structure Fire: 3 mins, 45 secs
FD-4	Los Angeles Fire Department Station 17	1601 South Santa Fe Avenue in Los Angeles	Approximately 0.7 miles south of Project Area	EMS: 6 mins, 38 secs Non-EMS: 6 mins, 31 secs Critical ALS: 5 mins, 35 secs Structure Fire: 5 mins, 19 secs

mins = minutes, secs = seconds, EMS = Emergency Medical Services, ALS = Advanced Life Support
Source: (GPA Consulting, 2019; Los Angeles Fire Department, 2017)

Figure 3.13-1: Emergency Services

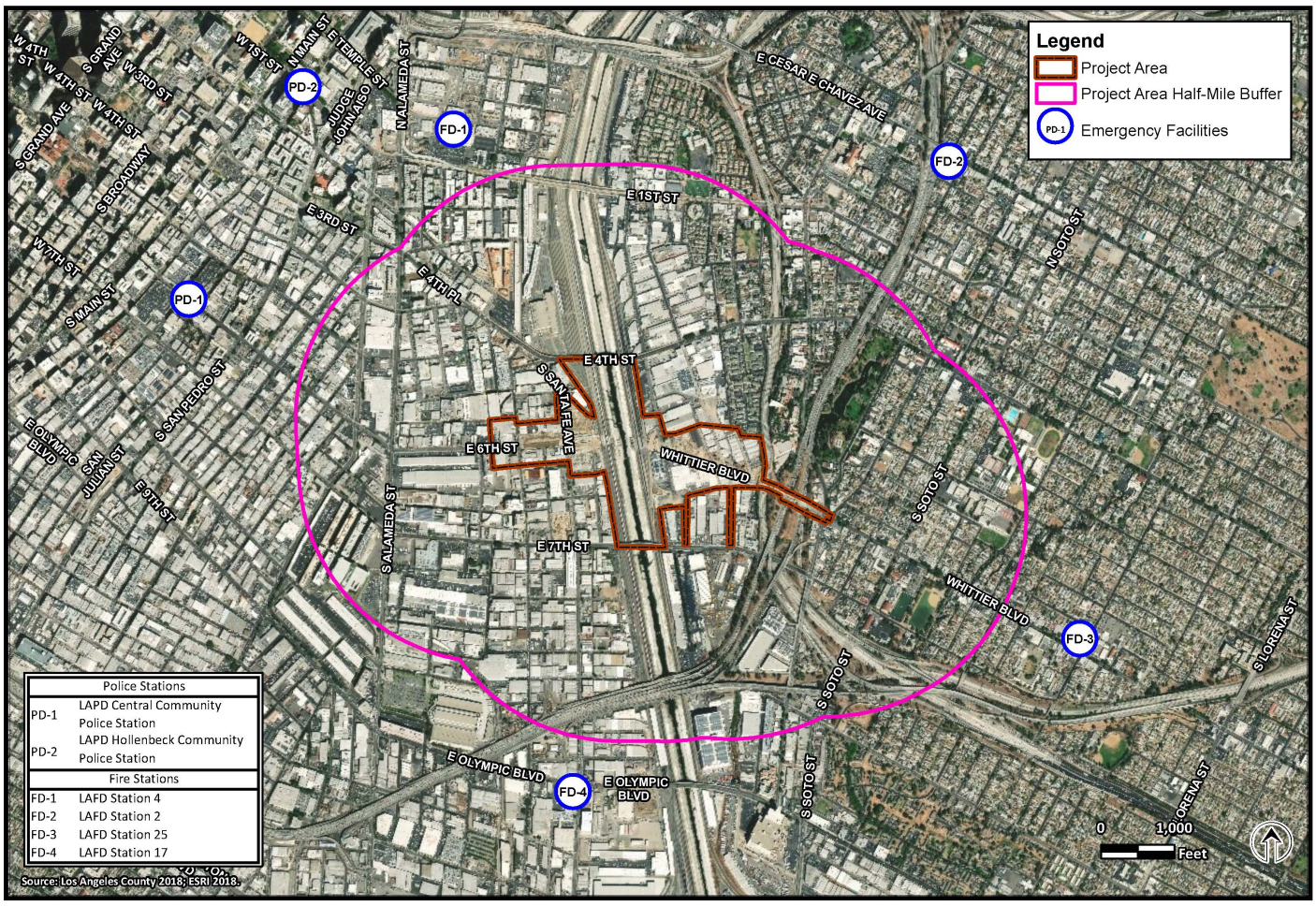


FIGURE 3.13-1: EMERGENCY SERVICES
Sixth Street PARC Project

3.13.2.3 Parks

The Project Area is primarily commercial and industrial, and there are no existing parks or recreation facilities. For additional discussion of parks and recreational facilities in the Project Study Area, see Chapter 3.14.

3.13.3 Environmental Impact Analysis

3.13.3.1 Screening Analysis

Several impacts and corresponding thresholds of significance in the following section were eliminated from further analysis in this EIR, including a discussion of public schools and other public facilities. These topics were eliminated because the IS for the proposed Project concluded there would be "No Impact," or impacts were identified to be "Less Than Significant… and will not be discussed further in the EIR." Only the topics described in the section below were determined to require further analysis in this EIR. Please see Chapter 3.14 for a discussion of parks. A copy of the Initial Study, which contains the eliminated topics, is provided in **Appendix A**.

3.13.3.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and the *L.A. CEQA Thresholds Guide*, the proposed Project would have a significant impact on Public Services if it would:

XV(a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:

- Fire Protection
- Police Protection

  K.1 Police Protection. The determination of significance shall be made on a case-by-case basis, considering the following factors:

  - The demand for police services anticipated at the time of project buildout compared to the expected level of service available. Consider, as applicable, scheduled improvements to LAPD services (facilities, equipment, and officers) and the project's proportional contribution to the demand; and
  - Whether the project includes security and/or design features that would reduce the demand for police services.

- Parks

  K.4 Recreation and Parks. The determination of significance shall be made on a case-by-case basis, considering the following factors:

  - The demand for recreation and park services anticipated at the time of project buildout compared to the expected level of service available. Consider, as applicable, scheduled

improvements to recreation and park services (renovation, expansion, or addition) and the project's proportional contribution to the demand.

3.13.3.3 Construction Impacts

XV(a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:

(i) **Fire Protection**

Because the Project Area is already a construction site, impacts on fire protection services from proposed construction activities are anticipated to be similar to the existing condition. During construction of the proposed Project, hazards associated with construction sites, such as the operation of mechanical equipment and use of flammable materials, would increase the risk of personal injury and fires. However, construction contractors and workers would be required to comply with mandatory Occupational Safety and Health Administration (OSHA) and California Occupational Safety and Health Administration (Cal/OSHA) regulations to minimize these hazards. The proposed Project would comply with the Los Angeles Building Code to ensure that proper safeguards to protect construction site workers, pedestrians, and neighboring properties are in place.

During construction, lane or road closures and the movement of construction equipment on local roads could affect fire protection services, such as emergency vehicle response. However, these impacts would be temporary and would not result in lasting effects. Construction-related trips would be scheduled with increased frequency during off-peak hours to minimize congestion that could delay emergency vehicles. Temporary detour routes would also be provided to minimize delays to emergency vehicles. In addition, the nearest LAFD responders would be notified to coordinate emergency response routing during construction. Despite road or lane closures, emergency vehicles would continue to have the right-of-way, and emergency vehicle response would not be substantially affected. In addition, the proposed Project would be required to comply with Los Angeles Fire Code standards to ensure that access to fire hydrants and fire lanes is provided.

Project construction would require the removal of contaminated soils, and the use of materials that could be hazardous (e.g., paints, sealants, cement). The transport, use, and disposal of these materials would be conducted in compliance with applicable federal, state, and local laws pertaining to the safe handling, transport, and disposal of hazardous materials, including the provisions of the LAFD, Hazardous Materials Unit, which include requirements for the use and storage of hazardous materials (see Section 3.8 for additional details). Therefore, impacts related to the use of hazardous materials would be less than significant.

During construction of the proposed Project, the construction of additional facilities is not expected to be required to maintain acceptable service ratios, response times, or other performance objectives for fire protection. Therefore, impacts would be less than significant, and no mitigation is required.

(ii) Police Protection

Because the Project Area is currently a construction site, impacts on police protection services from proposed construction activities are anticipated to be similar to the existing condition. During construction, lane or road closures and the movement of construction equipment on local roads could affect police protection services. However, these impacts would be temporary and would not result in lasting effects. In addition, the nearest LAPD station would be notified to coordinate emergency response routing during construction. Despite road or lane closures, law enforcement vehicles would continue to have the right-of-way, and police response would not be substantially affected.

During construction, the Project Site would be fenced and screened, and access would be controlled to deter theft, vandalism, and other crimes. Construction of additional facilities is not expected to be required to maintain acceptable service ratios, response times, or other performance objectives for police protection. The contractor would provide private security personnel to patrol and guard the site after work hours. If any traffic control plans are needed during construction, the nearest local police station would be notified to coordinate emergency response routing. Therefore, with implementation of these security features impacts would be less than significant, and no mitigation is required.

(iii) Parks

The proposed Project does not include the construction of housing, and construction workers would commute to the job site on a daily basis. Therefore, temporary construction of the proposed Project would not result in population growth that would increase the number of visitors to existing parks or other recreational facilities. Impacts would be less than significant, and no mitigation is required.

3.13.3.4 Operational Impacts

XV(a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:

(i) Fire Protection

The proposed Project would not include the construction of housing that would increase the population within the Project Study Area. However, the open space, recreational facilities, and events hosted in the park would increase traffic and visitors in the Project Study Area when compared to the existing construction site. Therefore, the demand for LAFD services would potentially increase. Project plans would be reviewed by the LAFD, and the final design of the proposed Project would be required to incorporate LAFD recommendations. In addition, fire prevention measures would be incorporated into building plans in accordance with the California Fire Code and City's Fire Code. The proposed Project would also be evaluated based on whether adequate access and any special equipment is provided onsite for firefighters. Therefore, impacts would be less than significant.

Proposed programming for the park includes large events with an estimated maximum capacity of up to 5,000 people (additional estimates for event capacity included in **Table 2.1**). For larger events, the proposed Project may require additional emergency services. However, large events would require

approval from the LAFD, and any additional permits or requirements from the LAPD, Department of City Planning, and Department of Public Works. By incorporating LAFD recommendations and complying with applicable standards and permits, impacts would be less than significant.

Because the proposed Project would attract visitors to the Project Study Area, additional traffic could result in impacts to service ratios or response times. The *Traffic Impact Analysis* (Kimley-Horn and Associates, Inc., 2019) prepared for the proposed Project identifies two intersections (Hewitt Street at Fourth Street and Santa Fe Avenue at Third Street) that would operate at level of service[i] (LOS) F during the PM peak hour in Existing (2018) With Project Conditions. However, the LOS at these intersections is expected to improve with implementation of the proposed Project, when compared to the LOS for the existing industrial land use (see Section 3.15 for additional discussion). Therefore, impacts to service ratios and response times would not be significant.

During large events, the LOS at these two intersections would also operate at LOS F during the PM peak hour. By implementing a site-specific traffic control plan for large events (see Section 3.15.4), impacts to service ratios or response times would be minimized. Mitigation measures to promote alternate modes of transportation, such as the creating mobility and bike share hubs, creating rideshare zones, and analyzing potential locations for creating and expanding public transportation in the vicinity of the proposed Project Site would be implemented to further minimize impacts due to traffic during large events (see **MM-TRANS-1**, **MM-TRANS-2**, **MM-TRANS-3**, and **MM-TRANS-4** in Section 3.15.5).

The proposed Project would not be located in a fire hazard area. To prevent hazards that would increase the need for fire protection, the proposed Project would be constructed in accordance with all applicable fire codes set forth by the state Fire Marshall and LAFD. The proposed Project would not create a fire hazard and would not require services that would exceed the capacity of LAFD to serve the site or surrounding areas.

Project operation would require the minor use of materials that could be hazardous, such as paint for the sports field(s), pesticides and fertilizers for the landscaping, and other materials used for maintenance of the facilities. The transport, use, and disposal of these materials would be conducted in compliance with applicable federal, state, and local laws pertaining to the safe handling, transport, and disposal of hazardous materials, including the provisions of the LAFD, Hazardous Materials Unit, which include requirements for the use and storage of hazardous materials (see Section 3.8 for additional details). Therefore, impacts related to the use of hazardous materials would be less than significant.

The proposed Project would incorporate LAFD recommendations and comply with applicable standards and permits, including Fire Code requirements regarding fire department access, response distances, and fire-flow. Therefore, the proposed Project is not expected to result in the need for the expansion of or construction of new fire protection facilities. Impacts would be less than significant, and no mitigation is required.

(ii) Police Protection

The proposed Project would not include the construction of housing that would increase the population within the Project Study Area. However, the open space, recreational facilities, and events hosted in the

[i] LOS describes the quality of traffic flow, ranging from LOS A (free flow conditions) to LOS F (excessive delay). See Section 3.15 (Transportation) for additional information.

park would increase traffic and visitors in the Project Study Area when compared to the existing condition. Because the proposed Project would increase the number of people in the Project Area, the demand for LAPD services could potentially increase. Project plans were reviewed by the LAPD, and the proposed Project would be required to incorporate LAPD recommendations in the final design. Once the proposed Project becomes part of RAP jurisdiction, the police protection services in the park would be covered by the existing park ranger system and the MOU between LAPD and RAP.

Proposed programming for the park includes large events with an estimated maximum capacity of 5,000 people (additional estimates for event capacity included in **Table 2.1**). For larger events, the proposed Project may require additional security and law enforcement services. Large events would require approval from the LAPD, and any additional permits or requirements from the LAFD, Department of City Planning, and Department of Public Works.

The proposed Project would increase traffic and visitors in the Project Study Area and provide additional public access to the LA River, when compared to the existing construction site. Therefore, there could be an increased demand for additional police protection, especially during flood conditions and public events. As discussed above, police protection services in the park would be covered by the existing park ranger system and LAPD, as mandated in the existing MOU. By incorporating LAPD recommendations and complying with applicable permits, the proposed Project is not expected to result in the need for the expansion of or construction of new police protection facilities. Therefore, impacts would be less than significant, and no mitigation is required.

The proposed Project would conform to the California Building Code, which establishes the minimum construction, engineering, and safety requirements for new buildings. In addition, the proposed Project includes lighting along the park's perimeter and sidewalks, and at the playgrounds, performance stages, and sports fields. Park lighting would be limited to the proposed operating hours (between 5:00 a.m. and 10:30 p.m.) and would be consistent with the City's Municipal Code and River Improvement Overlay (RIO) Ordinance (Ordinance Number 183145). The lighting would meet the following requirements to improve visibility near roadways and in dark areas, increase the sense of security for park users, and deter crime (Horton Lees Brogden Lighting Design, 2018):

- Provide adequate vertical illuminance to identify a face from a distance of at least 30 feet;
- Be uniform throughout the Project Site to reduce the necessity for eye adjustment when scanning or using the area;
- Minimize glare that would result in annoyance, discomfort, or loss in visibility; and
- Provide uniform vertical illuminance to minimize shadows.

There are several streets that bisect the park (i.e., Santa Fe Avenue, Mesquit Street, Mission road, Anderson Street, and Clarence Street), which could result in safety hazards from oncoming motorists for visitors traveling throughout the park. Raised pedestrian crosswalks would be provided at these intersections to increase safety and visibility for pedestrians and bicyclists. In addition, the eastern end of the proposed Arts Plaza and the western end of the proposed East Park border several railroad tracks. Existing fencing separates the railroad tracks from the proposed Project Site, minimizing risks to public safety and security.

With the safety features described above, the proposed Project is not expected to increase the demand for police services. Therefore, impacts would be less than significant, and no mitigation is required.

(iii) Parks

The proposed Project would not result in population growth or substantial employment growth that would increase the demand for existing parks or other recreational facilities in the Project Study Area. The proposed Project would not require the expansion of existing park facilities for construction of new park facilities. Rather, the proposed Project would provide additional recreation and park services that may alleviate the demand for other existing parks and recreational facilities in the Project Study Area (for additional discussion see Chapter 3.14). Therefore, impacts would be less than significant, and no mitigation is required.

3.13.4 Best Management Practices

There are no best management practices for Public Services. With implementation of the best management practices identified in Section 3.15.4 (Transportation), impacts associated with delays to emergency vehicles would be avoided or minimized.

3.13.5 Mitigation Measures

There are no mitigation measures for Public Services. The mitigation measures identified in Section 3.15.5 (Transportation) address impacts associated with traffic concerns. As discussed in Section 3.15.5, traffic control plans for large events shall identify emergency services egress and access. Therefore, impacts on Public Services would be less than significant.

3.13.6 Significant Unavoidable Adverse Impacts

With implementation of the mitigation measures described in Section 3.15.5 (Transportation), there are no significant unavoidable adverse impacts on Public Services resulting from implementation of the proposed Project.

3.13.7 Cumulative Impacts

The cumulative setting for Public Services is the Project Study Area. Within Central City North, proposed development projects include residential and live/work units, commercial spaces (i.e., office and retail), and hotels. These proposed development projects could result in an increase in permanent residents and visitors to the Project Study Area, and therefore an increase in the demand for police and fire protection services within the Project Study Area. Higher demand for police and fire protection services could contribute to adverse impacts related to Public Services (i.e., a reduction in acceptable service ratios, response times, or other performance objectives that would require the need for new or physically altered governmental facilities).

However, proposed development projects would be required to meet the City's response distance, emergency access, fire flow, and other safety standards and requirements in the Los Angeles Fire Code and Building Code. Proposed development projects would also be subject to review by LADOT, LAPD, and LAFD to minimize any potential impacts. In addition, proposed developments would be evaluated based on whether they are consistent with the City's General Plan and Municipal Code. Currently, there

are no fire or police stations that are proposed for development within the Project Study Area. Therefore, the proposed Project would not result in cumulative impacts related to fire and police protection.

An increase in residential units could also increase the usage of parks and recreational facilities within the Project Study Area, which could contribute to the deterioration of existing park facilities. However, these proposed development projects would be required to comply with the Quimby Act and City Ordinance Number 184505, which require proposed housing developments to set aside funds or land for the provision of parks and recreational facilities (for additional discussion, see Section 3.14). Proposed developments would also be evaluated based on whether they are consistent with the City's General Plan and other local development regulations. In addition, the proposed Project would provide open space and recreational opportunities for these communities, helping to alleviate usage of nearby parks and recreational facilities. Therefore, the proposed Project would not result in cumulative impacts related to parks.

3.14 Recreation

This section describes the affected environment and regulatory setting for Recreation related to the Project Area and surrounding area. In addition, this section describes the potential impacts related to Recreation that would result from implementation of the proposed Project. As noted in the analysis below, impacts associated with Recreation during construction or operation of the proposed Project would be less than significant and no mitigation measures are required.

Impacts related to Recreation may extend beyond the Project Area, which includes the area of direct impacts resulting from construction and operation of the proposed Project. Therefore, the discussion of the affected environment and environmental impacts related to Recreation is based on the Project Study Area, which includes the Project Area and a surrounding half-mile buffer.

The information in this section is based on the Community Impact Assessment (CIA) prepared for the proposed Project (GPA Consulting, 2019). It is unlikely that community conditions have changed substantially from that described in this technical study.

3.14.1 Regulatory Setting

A review of the various federal, state, regional, and local government regulatory requirements was conducted to identify regulations that relate to parks, recreational facilities, and open spaces. This section summarizes the various regulatory requirements that are relevant to the proposed Project.

3.14.1.1 State

Quimby Act

Passed in the State of California in 1975, the Quimby Act allows governing bodies within a city or county to dedicate land or impose fees for park or recreational purposes as a condition for the approval of development projects (California Legislative Information, 2015). The goal of the Quimby Act is to require developers to mitigate the impacts of their proposed developments, ensuring adequate acres of open space for residents (three to five acres for every 1,000 residents).

3.14.1.2 Local

Los Angeles Municipal Code – Ordinance Number 184505

Under California's Quimby Act, Ordinance Number 184505 requires housing developers to dedicate land and/or pay a "park and recreation impact fee" for the purpose of acquiring, expanding, and improving park and recreational facilities for residents (City of Los Angeles, 2016). The fees or acreage of land set aside for park and recreation purposes varies depending on the number of dwelling units and/or the number of occupants per dwelling unit. Recreational sites and facilities must also be within a specified radius of the proposed development.

City of Los Angeles General Plan

As required by the State of California, the City's General Plan addresses goals, policies, and standards related to land use, circulation, housing, conservation, open space, noise, and safety (City of Los Angeles, 2017). To address goals that meet the unique needs of the City, the General Plan also includes elements

related to health and wellness, air quality, historic preservation and cultural resources, and public facilities and services. Several of the General Plan elements are currently undergoing revisions. The General Plan elements that pertain to Recreation are described in more detail in the following sections.

Central City North Community Plan

The Central City North Community Plan summarizes goals, objectives, and policies related to recreation and parks facilities, as well as open spaces, as listed below (City of Los Angeles, 2000). The Central City North Community Plan is being updated, but the update will not be complete before the availability of the Draft EIR for public comment.

- **Goal 4:** Adequate recreation and park facilities which meet the needs of the residents in the Plan Area
- **Goal 5:** A community with sufficient open space in balance with development to serve the recreational, environmental, and health needs of the community and to protect environmental and aesthetic resources.
- **Objective 5-1:** To preserve existing open space resources and where possible develop new open space.
- **Policy 5-1.1:** Encourages the retention of passive and visual open space which provides a balance to the urban development of the Plan Area.
- **Objective 5-2:** To ensure the accessibility, security, and safety of parks by their users, particularly families with children and senior citizens.
- **Policy 5-2.1:** Ensure that parks are adequately illuminated for safe use at night where appropriate.

The Downtown Community Plan, DTLA 2040, includes a vision for providing high quality public spaces that support the growth in populations of workers, residents, and visitors in Downtown, and that are accessible to all (City of Los Angeles, 2019).

Boyle Heights Community Plan

The Boyle Heights Community Plan is intended to ensure that sufficient land is designated for the community's needs (City of Los Angeles, 1998). The Boyle Heights Community Plan is being updated, but the update will not be complete before the availability of the Draft EIR for public comment. The Community Plan includes objectives, policies, and programs related to recreation and parks facilities, as well as open spaces, as listed below.

- **Objective 1:** To provide adequate recreation and park facilities which meet the needs of the residents in the community.

Open Space Element

The Open Space Element of the City's General Plan provides information to guide decision makers and interested citizens regarding the identification, preservation, conservation, and acquisition of open space in the City (City of Los Angeles, 1973). The Element aims to ensure that the City has sufficient open space to meet its recreational, environmental, health, and safety needs. In addition, the Element aims to conserve and preserve the City's environmental resources, as well as provide open spaces that contribute to the City's identity.

Service Systems Element/Public Recreation Plan

The Public Recreation Plan includes policies and programs that emphasize neighborhood and community facilities, including recreational sites and parks (City of Los Angeles, n.d.). The Plan's objectives include developing standards for the City's public recreational facilities, with the goal of meeting the City's recreational needs and benefiting the greatest number of people, while minimizing costs and environmental impacts.

Los Angeles Countywide Comprehensive Parks and Recreation Needs Assessment

The Los Angeles Countywide Comprehensive Parks and Recreation Needs Assessment, initiated by the Los Angeles County Department of Parks and Recreation, provides an evaluation of the existing facilities within individual study areas to determine levels of need for additional parks (Los Angeles County Department of Parks and Recreation, 2016). The Needs Assessment is intended to inform planners and decision-makers with regards to future funding, equitable allocation, staffing and programming, and other needs. The latest Needs Assessment was completed in 2016. Existing park facilities throughout the County were inventoried, and this inventory included local parks, regional recreation parks, and regional open space parks.

Based on the Needs Assessment, Boyle Heights and Central City North demonstrate fewer park acres available for the amount of residents compared to Los Angeles County as a whole (Los Angeles County Department of Parks and Recreation, 2016). In addition, Boyle Heights and Central City North demonstrate a higher need for parks compared to Los Angeles County as a whole.

3.14.2 Environmental Setting

The City's Department of Recreation and Parks (RAP) operates and manages the City's parks and recreational facilities (Department of Recreation and Parks, 2018). In addition, RAP supervises the construction of new facilities and improvements to existing facilities. The RAP park system includes more than 16,000 acres of parkland, with recreational, social, and cultural programs offered at 444 park sites throughout every neighborhood in the City.

The Project Area is primarily commercial and industrial, and there are no existing parks or recreation facilities. Within the Project Study Area (i.e., half-mile buffer around the Project Area), the area east of South Clarence Street is heavily residential area. Residences are sparse in the portion of the Project Study Area that is west of the Los Angeles River. The parks and recreation facilities within the Project Study Area are listed in **Table 3.14-1** (see **Figure 3.14-1**, Parks and Recreation Centers).

According to the *Los Angeles Countywide Comprehensive Parks and Recreation Needs Assessment*, Boyle Heights and Central City North demonstrate fewer park acres available for the amount of residents compared to Los Angeles County as a whole (Los Angeles County Department of Parks and Recreation, 2016). In addition, Boyle Heights and Central City North demonstrate a higher need for parks compared to Los Angeles County as a whole. The results of the assessment are summarized in **Table 3.14-2**.

Table 3.14-1: Parks and Recreation Facilities

Location	Property Name	Address	Distance from Project Area	Owner/Operator	Amenities
Parks					
P-1	Gladys Park	East Sixth Street and Gladys Avenue in Los Angeles	0.5 mile west of Project Area	City of Los Angeles, Department of Recreation and Parks	Basketball Courts (Unlighted/Outdoor), Outdoor Gym, Picnic Tables
P-2	Arts District Park	501 South Hewitt Street in Los Angeles	0.2 mile northwest of Project Area	City of Los Angeles, Department of Recreation and Parks	Children's Play Area, Picnic Area
P-3	Hollenbeck Park	415 South Street Louis Street in Los Angeles	0.3 mile northeast of Project Area	City of Los Angeles, Department of Recreation and Parks	Barbeque Pits, Children's Play Area, Picnic Tables, Lake, Bridge
P-4	Boyle Heights Sports Center	933 South Mott Street in Los Angeles	0.3 mile southeast of Project Area	City of Los Angeles, Department of Recreation and Parks	Barbecue Pits, Baseball Diamond, Basketball Courts, Children's Play Area, Community Room, Picnic Tables, Track Field, Jogging Path, Multipurpose Sports Field, Synthetic Field
Recreation Facilities					
R-1	Pecan Recreation Facility	145 South Pecan Street in Los Angeles	0.5 mile northeast of Project Area	City of Los Angeles, Department of Recreation and Parks	Basketball Courts, Children's Play Area, Community Room, Handball Courts, Picnic Tables, Restrooms, Seasonal Pool, Volleyball Courts, Multipurpose Sports Field, Baseball Diamond
R-2	Aliso Pico Recreation Center	370 South Clarence Street in Los Angeles	0.3 mile northeast of Project Area	Los Angeles Parks Foundation	Children's Play Area, Auditorium, Basketball Courts, Indoor Gym, Volleyball Courts, Baseball Diamond, Tennis Courts,

Location	Property Name	Address	Distance from Project Area	Owner/Operator	Amenities
					Community Room, Computer Labs, Cultural Educational Facility, Kitchens, Multi-Purpose Sports Field (with youth-sized ball diamond), Music Room
R-3	Hollenbeck Recreation Center	415 South Street Louis Street in Los Angeles	0.4 mile northeast of Project Area	City of Los Angeles, Department of Recreation and Parks	Auditorium, Barbecue Pits, Children's Play Area, Community Room, Picnic Tables, Bandshell, Kitchen, Outdoor Fitness Equipment, Preschool

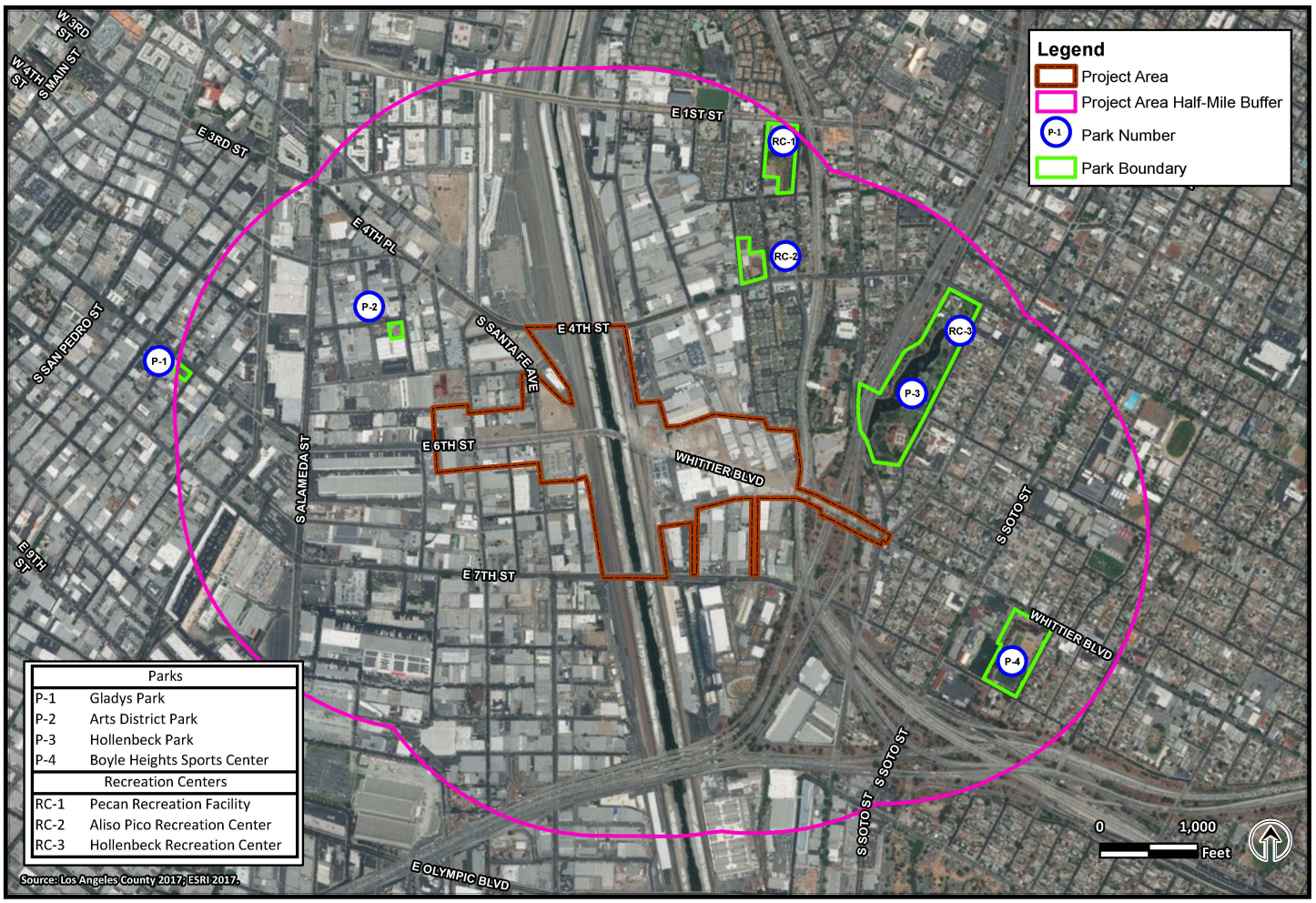
Source: (GPA Consulting, 2019)

Table 3.14-2: Parks and Recreation Needs Assessment

Location	Park Acres per 1,000 People	Percent of Population (%)	
		High Need	Very High Need
Los Angeles County	3.3	28	23
Boyle Heights	0.6	44	50
Central City North	1.6	30	35

Source: (Los Angeles County Department of Parks and Recreation, 2016)

Figure 3.14-1: Parks and Recreation Centers



ENGINEERING
CITY OF LOS ANGELES

FIGURE 3.14-1: PARKS AND RECREATION CENTERS
Sixth Street PARC Project

3.14.3 Environmental Impact Analysis

3.14.3.1 Screening Analysis

Several impacts and corresponding thresholds of significance in the following section were eliminated from further analysis in this EIR. Topics were eliminated if the Initial Study for the proposed Project concluded there would be "No Impact," or if impacts were identified to be "Less Than Significant… and will not be discussed further in the EIR." Therefore, only the topics described in the section below were determined to require further analysis in this EIR. A copy of the Initial Study, which contains the eliminated topics, is provided in **Appendix A**.

3.14.3.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and the *L.A. CEQA Thresholds Guide*, the proposed Project would have a significant impact on Recreation if it would:

XVI(a) 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.

K.4 Recreation and Parks. The determination of significance shall be made on a case-by-case basis, considering the following factors:

- The demand for recreation and park services anticipated at the time of project buildout compared to the expected level of service available. Consider, as applicable, scheduled improvements to recreation and park services (renovation, expansion, or addition) and the project's proportional contribution to the demand; and

XVI(b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. (See *LA CEQA Threshold Guide* K.4 Recreation and Parks)

3.14.3.3 Construction Impacts

XVI(a): 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.

The proposed Project does not include the construction of housing, and construction workers would commute to the job site on a daily basis. Therefore, temporary construction of the proposed Project would not result in population growth that would increase the number of visitors to existing parks or other recreational facilities.

The Arts District Park, located approximately 0.15 mile from the Project Area, is the closest park to the areas where construction activities and staging would occur. Based on distance, construction of the proposed Project is not expected to deter visitors from using any of the parks or recreational facilities in the Project Study Area (listed in **Table 3.14-1**), nor would construction increase usage of these facilities.

Because construction of the proposed Project would not affect the usage of parks in the Project Study Area, the deterioration of existing facilities is not anticipated to occur or be accelerated. Therefore, impacts would be less than significant, and no mitigation is required.

XVI(b): Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

During construction of the proposed park and recreational facilities, construction activities could result in the release of hazardous materials, and the use of construction equipment could result in temporary impacts related to noise, air quality, and greenhouse gas emissions. These impacts are addressed in Sections 3.2, 3.7, 3.8, and 3.11. Construction impacts related to hazardous materials, noise, air quality, and greenhouse gas emissions would be temporary, and would cease following completion of construction. Therefore, impacts would be less than significant, and no mitigation is required.

3.14.3.4 Operational Impacts

XVI(a): 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.

The proposed Project does not include the construction of housing, and therefore, would not result in population growth that would increase the use of existing parks or other recreational facilities in the Project Study Area.

One of the objectives of the proposed Project is to serve the open space and recreational needs of surrounding communities. By converting an existing construction zone into approximately 13 acres of public recreational space, the proposed Project would increase the number of park acres available to residents in the Project Study Area. In addition, the proposed Project would serve communities that were determined to have a "high" or "very high" need for parks in the Los Angeles Countywide Comprehensive Parks and Recreation Needs Assessment.

The proposed Project is expected to result in beneficial impacts because it would reduce the pressure on existing parks and recreational facilities, rather than cause substantial physical deterioration to occur or be accelerated. Therefore, impacts would be less than significant, and no mitigation is required.

XVI(b): Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

The proposed Project would include the construction of recreational facilities that may include sports field(s) and court(s), bicycle paths, skate park/facilities, recreation trails, community building(s), a dog park, playgrounds, and stationary exercise equipment. Because the Project Area is a construction zone located in a highly developed urban environment, the proposed Project would not result in the destruction of natural environment or alteration of landforms that would have physical impacts on the environment. Rather, the proposed Project would improve the natural environment by providing more open space and remediating hazardous soils to standards acceptable by the Los Angeles County Fire Department and other regulatory agencies as required.

However, the proposed Project would attract visitors to the Project Study Area, resulting in increased vehicular traffic that could result in impacts related to air quality, greenhouse gas emissions, and transportation. These impacts are addressed in Sections 3.2, 3.7, and 3.15. The analysis in this EIR has determined that these operational impacts can be reduced to less than significant levels with standard regulatory requirements and/or the implementation of BMPs and mitigation measures. Therefore, physical effects on the environment would be less than significant.

In addition, the proposed Project would not result in population growth or substantial employment growth that would increase the demand for existing parks or other recreational facilities in the Project Study Area. As stated above, the proposed Project would not reduce the area available for recreational activities; rather, the proposed Project would provide additional recreation and park services that may alleviate the demand for other existing parks and recreational facilities in the Project Study Area. As also discussed above, the proposed Project would serve communities that were determined to have a "high" or "very high" need for parks in the Los Angeles Countywide Comprehensive Parks and Recreation Needs Assessment. Therefore, impacts would be less than significant, and no mitigation is required.

3.14.4 Best Management Practices

There are no Best Management Practices related to Recreation.

3.14.5 Mitigation Measures

Impacts related to Recreation would be less than significant; therefore, mitigation measures are not required.

3.14.6 Significant Unavoidable Adverse Impacts

There are no significant unavoidable adverse impacts on Recreation resulting from implementation of the proposed Project.

3.14.7 Cumulative Impacts

The cumulative setting for Recreation is the Project Study Area. Of the parks in the Project Study Area (listed in **Table 3.14-1**), Hollenbeck Park is the only park or recreational facility with proposed or scheduled improvements. Walkway improvements are currently under construction at Hollenbeck Park, and the park is in the design phase for the addition of a new walking path (Department of Recreation and Parks, 2016). In addition, LA Sanitation is proposing a Lake Rehabilitation and Stormwater Management Project for Hollenbeck Park, which is currently undergoing environmental review, with construction proposed from September 2019 to October 2020 (LA Stormwater, 2017). Therefore, some portions of Hollenbeck Park may be closed to the public during the time of buildout of the proposed Project. However, the proposed Project would serve as an alternative to Hollenbeck Park, providing additional park area and recreational facilities to meet the demand for recreation and park services.

Within Central City North, many of the proposed development projects include residential and live/work units. The proposed Los Angeles to Anaheim section of the California High Speed rail system would have the potential to promote higher density, mixed-use, pedestrian-oriented development around the stations. Thus, an increase in residential units and public transportation could increase the usage of parks and recreational facilities within the Project Study Area, which could contribute to adverse impacts related to Recreation (i.e., deterioration of existing facilities). However, these proposed development projects would be required to comply with the Quimby Act and City Ordinance Number 184505, which require proposed housing developments to set aside funds or land for the provision of parks and recreational facilities. Proposed developments would also be evaluated based on whether they are consistent with the City's General Plan and other local development regulations. In addition, the proposed Project would provide open space and recreational opportunities for these communities,

helping to alleviate usage of nearby parks and recreational facilities. Therefore, the proposed Project is not expected to contribute to cumulative impacts related to Recreation.

3.15 Transportation

This section describes the affected environment and regulatory setting for Transportation related to the Project Area and surrounding area. In addition, this section describes the potential impacts related to Transportation that would result from implementation of the proposed Project. As noted in the analysis below, impacts associated with Transportation during construction or operation of the proposed Project would be less than significant with mitigation, which includes **MM-TRANS-1: Mobility Hub, MM-TRANS-2: Bicycle Facilities, MM-TRANS-3: Rideshare Zones, and MM-TRANS-4: Public Transportation.** Best management practices related to managing construction traffic, requiring access to surrounding parcels during construction, and site-specific traffic control plans for large events are also included. Consistent with Senate Bill (SB) 743, transportation impacts are considered based on vehicle miles traveled (VMT). A transportation impact analysis based on level of service was initially prepared for this project and is also included. The information in this section is based on the *Community Impact Assessment* (GPA Consulting, 2019), *Traffic Impact Analysis* (Kimley-Horn and Associates, Inc., 2019a), and *Parking Demand Analysis* (Kimley-Horn and Associates, Inc., 2019b) prepared for the proposed Project.

3.15.1 Regulatory Setting

3.15.1.1 State

Assembly Bill 1385 – California Complete Streets Act

Assembly Bill (AB) 1385, also known as the California Complete Streets Act, was adopted by the California State Legislature in 2008. AB 1385 requires local jurisdictions to "plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways, defined to include motorists, pedestrians, bicyclists, children, persons with disabilities, seniors, movers of commercial goods, and users of public transportation, in a manner that is suitable to the rural, suburban or urban context." AB 1358 ensures that local streets and roads are designed to accommodate the needs of bicyclists, pedestrians, and public transit users, in addition to motorists.

California Senate Bill 743

California Senate Bill (SB) 743, which was signed into law in 2013, requires the Office of Planning and Research to amend the California Environmental Quality Act (CEQA) guidelines for transportation impact analysis. Under SB 743, level of service (LOS) and other measures of vehicular capacity or traffic congestion will no longer serve as the basis for determining significant impacts for land use projects and plans. Measurements of transportation impacts may include VMT, VMT per capita, automobile trip generation rates, or automobile trips generated. SB 743 was enacted in order to balance the needs of congestion management with statewide goals of reducing greenhouse gas emissions, developing multimodal transportation networks, and promoting a diversity of land uses. Section 15046.3 of the CEQA Guidelines requires that these guidelines apply prospectively beginning on July 1, 2020, statewide. The City of Los Angeles adopted guidance to implement SB 743 in July 2019, updated it in August 2019, and revised the Transportation Assessment Guidelines (TAG) further in July 2020.

3.15.1.2 Regional

Southern California Association of Governments Regional Transportation Plan/Sustainable Communities Strategy

The Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) is a long-range plan that balances future mobility and housing needs with economic, environmental, and public health goals (Southern California Association of Governments, 2020). The SCAG region is made up of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. The RTP/SCS includes input from local and tribal governments, transportation commissions, non-profit organizations, businesses, and local stakeholders.

The strategies outlined in the RTP/SCS aim to help the region meet greenhouse gas emission reduction goals, achieve Federal Clean Air Act requirements, preserve open spaces, improve public health, enhance roadway safety, and support the movement of goods and use of resources throughout the SCAG region. The RTP/SCS includes over 4,000 transportation projects within the SCAG region, including highway improvements, railroad grade separations, bicycle lanes, transit, and bridge replacements.

3.15.1.3 Local

City of Los Angeles Transportation Assessment Guidelines

The Los Angeles Department of Transportation (LADOT) released the TAG in July 2019, updated them in August 2019, and revised further in July 2020. The TAG provides standards for preparation of transportation assessments in the City and supersedes the Transportation Impact Study guidelines that were last updated in December 2016. The TAG conforms to the requirements of SB 743, incorporates the December 2018 updates to the CEQA guidelines proposed by the Governor's Office of Planning and Research, and conforms with the City's most recent CEQA Thresholds Guide update. As part of the TAG, the City updated its travel demand simulation model and transportation impact thresholds to be consistent with the VMT methodology (Los Angeles Department of Transportation, 2020).

City of Los Angeles Municipal Code

The City's Municipal Code provides the regulatory framework and ordinances of the City (City of Los Angeles, 2018). The Municipal Code assists City offices, departments, and other governmental agencies in carrying out their functions, and provides citizens with information regarding the City's regulations. Section 12.21 of the City's Municipal Code includes general provisions for parking regulations, which indicate the number of spaces required per square foot of a given land use.

LAMC 12.26.J City of Los Angeles Transportation Demand Management Ordinance

The City's Transportation Demand Management (TDM) Ordinance requires certain projects to incorporate strategies that reduce drive-alone vehicle trips and improve access to destinations and services. The ordinance is revised and updated periodically (Los Angeles Department of Transportation, 2020).

City of Los Angeles General Plan

As required by the State of California, the City's General Plan addresses goals, policies, and standards related to land use, circulation, housing, conservation, open space, noise, and safety (City of Los Angeles, 2017). To address goals that meet the unique needs of the City, the General Plan also includes elements related to health and wellness, air quality, historic preservation and cultural resources, and public facilities and services. Several of the General Plan elements are currently being updated.

Mobility Plan 2035 (Circulation Element)

The City's Mobility Plan 2035 is an element of the General Plan that updates the Circulation Element and integrates the 2010 Bicycle Plan (City of Los Angeles, 2016). The Mobility Plan implements the requirements of AB 1385 by providing the policy foundation for achieving a transportation system that balances the needs of all road users. The Mobility Plan lays the foundation for a network of complete streets and establishes new complete street standards that will provide safe and efficient transportation for pedestrians (especially for vulnerable users such as children, seniors and the disabled), bicyclists, transit riders, and car and truck drivers. The policies outlined in the Mobility Plan include the following:

Safety

- **Policy 1.2:** Implement a balanced transportation system on all streets, tunnels, and bridges using complete streets principles to ensure the safety and mobility of all used.

Infrastructure

- **Policy 2.1:** Design, plan, and operate streets to serve multiple purposes and provide flexibility in design and adapt to future demands.
- **Policy 2.6:** Provide safe, convenient, and comfortable local and regional bicycling facilities for people of all types and abilities.

Access

- **Policy 3.1:** Recognize all modes of travel, including pedestrian, bicycle, transit, and vehicular modes as integral components of the City's transportation system.
- **Policy 3.2:** Accommodate the needs of people with disabilities when modifying or installing infrastructure in the public right-of-way.

Clean Environments and Healthy Communities

- **Policy 5.1:** Encourage the development of a sustainable transportation system that promotes environmental and public health.

Downtown Los Angeles Community Plan

A draft Downtown LA Community Plan was released in November 2020 and is currently pending adoption. Mobility and connectivity goals include supporting the development of mobility hubs at key destinations, facilitating integration between different modes of travel to create a seamless experience as users switch between modes and to promote transit use and active transportation, and strengthening pedestrian and bicycle connections to the LA River to provide access to open space and recreation.

Boyle Heights Community Plan Update

An update to the Boyle Heights Community Plan is currently underway. One of the mobility and connectivity policies focuses on prioritizing street improvements and the completion of a comprehensive bicycle lane network that enables people of all ages and abilities to safely and comfortably reach the community's schools, job centers and transit stations from any part of Boyle Heights. These policies promote dedicated bicycle signals at key intersections and improved pedestrian and bicycle safety and mobility.

City of Los Angeles Vision Zero Action Plan

The stated goal of Vision Zero is to eliminate traffic-related deaths in Los Angeles by 2025 through a number of strategies, including modifying the design of streets to increase the safety of vulnerable road users. Extensive crash data analysis is conducted on an ongoing basis to prioritize intersections and corridors for implementation of projects throughout the City that will have the greatest effect on overall fatality reduction. Vision Zero Corridor Plans help implement Vision Zero. If a proposed project is within the High Injury Network (HIN), appropriate improvements will be determined in consultation with LADOT (Los Angeles Department of Transportation, 2020).

Complete Street Design Guide

The Complete Streets Design Guide provides design concepts and best practices to promote safe and accessible streets for all transportation users (i.e., pedestrians, bicyclists, transit riders, and motorists) within the City (City of Los Angeles, n.d.). The purpose of the guide is to supplement existing engineering practices and requirements in order to meet the goals of California's Complete Streets Act (AB 1358). The guide accompanies Mobility Plan 2035 and provides a framework for stakeholders to plan for, implement, and maintain complete streets.

Citywide Design Guidelines

The City of Los Angeles Citywide design guidelines adopted in October 2019 include sections relevant to development projects where improvements are proposed within the public realm. Specifically, Guidelines one through three provide building design strategies that support the pedestrian experience. The Guidelines provide best practices in designing that apply in three spatial categories of site planning, building design and public right of way. Guideline 1: Promote a safe, comfortable and accessible pedestrian experience for all. Guideline 2: Carefully incorporate vehicular access such that it does not degrade the pedestrian experience. Guideline 3: Design projects to actively engage with streets and public space and maintain human scale.

Los Angeles County Congestion Management Program

The Los Angeles County Congestion Management Program (CMP) was developed in response to California Proposition 111 (i.e., the Traffic Congestion Relief and Spending Limitation Act of 1990) and approved June 1990. The most recent CMP is the 2010 CMP. The CMP is intended to address the impact of local growth on the regional transportation system and address regional congestion by linking land use, transportation, and air quality decisions (Los Angeles County Metropolitan Transportation Authority, 2010).

Los Angeles River Revitalization Master Plan

The Los Angeles River Revitalization Master Plan (Master Plan) includes plans to construct a continuous river greenway, providing habitat restoration, open spaces, and pedestrian and bicycle paths along the Los Angeles River (City of Los Angeles, 2007). A few segments of the path have been constructed, with plans to extend the trail along the entire 32-mile corridor. The primary goals of the Master Plan are:

- Establishing design, land use, and development guidelines within the River zone;
- Improving water quality, water resources, and ecological functioning of the LA River;
- Providing public access to the LA River;
- Providing recreation, open space, and wildlife habitat;
- Preserving and enhancing flood control features of the LA River; and
- Increasing community awareness of the LA River.

To achieve these goals, the Master Plan includes visions for bikeways and pedestrian paths to the LA River, including the Los Angeles River Bike Path Gap Closure Project to create a continuous greenway adjacent to the LA River.

3.15.2 Environmental Setting

3.15.2.1 Existing Street System

The Project Study Area (i.e., Project Area and surrounding half-mile buffer) has a dense street network ranging from freeways to local city streets. Primary roadways in the Project Study Area are listed in **Table 3.15-1** (See **Figure 3.15-1**, Transportation Facilities). Descriptions of the roadway types in the Project Study Area, which are summarized in **Table 3.15-2**, are based on street classifications defined in Mobility Plan 2035 and the Complete Streets Design Guide (City of Los Angeles, 2016; City of Los Angeles, n.d.).

Table 3.15-1: Major Roadways

Roadway Name	Location	Description	Owner/Operator
First Street	East-west street to the north of the Project Area	Avenue II	City of Los Angeles, Department of Public Works
Third Street	East-west street to the north of the Project Area	Avenue II	City of Los Angeles, Department of Public Works
Fourth Street	East-west street that runs along the northern edge of the Project Area	Avenue II	City of Los Angeles, Department of Public Works

Roadway Name	Location	Description	Owner/Operator
Sixth Street/Whittier Boulevard	East-west street located in the northwest portion of the Project Area. The arterial is Sixth Street west of the LA River and Whittier Boulevard east of the LA River	Avenue II	City of Los Angeles, Department of Public Works
Seventh Street	East-west street that runs along the southern edge of the Project Area	Avenue II west of Boyle Avenue; collector street east of Boyle Avenue	City of Los Angeles, Department of Public Works
Alameda Street	North-South street to the west of the Project Area	Avenue I	City of Los Angeles, Department of Public Works
South Anderson Street	North-South street located in the eastern area of the Project Area	Local street	City of Los Angeles, Department of Public Works
Boyle Avenue	North-South street to the east of the Project Area	Avenue II; Modified streets north of Whittier Avenue	City of Los Angeles, Department of Public Works
South Central Avenue	North-South street to the west of the Project Area	Avenue I	City of Los Angeles, Department of Public Works
South Clarence Street	North-South street located in the eastern area of the Project Area	Local street	City of Los Angeles, Department of Public Works
Hewitt Street	North-South street to the west of the Project Area	Collector Street	City of Los Angeles, Department of Public Works
Jesse Street	East-west street located in the eastern area of the Project Area	Local street	City of Los Angeles, Department of Public Works
Mateo Street	North-South street located in the northwest portion of the Project Area	Avenue III	City of Los Angeles, Department of Public Works
Mesquit Street	North-South street located in the western area of the Project Area	Local street	City of Los Angeles, Department of Public Works
Meyer Street	North-south street located in the southeastern area of the Project Area	Local street	City of Los Angeles, Department of Public Works

Roadway Name	Location	Description	Owner/Operator
South Mission Road	North-south street centrally located in the Project Area, east of the Los Angeles River	Avenue III	City of Los Angeles, Department of Public Works
Santa Fe Avenue	North-South street located in the northwest portion of the Project Area	Avenue II	City of Los Angeles, Department of Public Works
Soto Street	North-south street located to the east of the Project Area	Avenue II	City of Los Angeles, Department of Public Works
State Route 60	East-west highway located the southeast of the Project Area	Freeway	California Department of Transportation
Interstate 5	North-south interstate that crosses over through eastern extend of the Project Area	Freeway	California Department of Transportation
Interstate 10	East-west interstate that crosses over the easternmost extend of the Project Area	Freeway	California Department of Transportation
U.S. Route 101	North-south highway that runs along the eastern edge of the Project Area	Freeway	California Department of Transportation

Source: (GPA Consulting, 2019; Kimley-Horn and Associates, Inc., 2019a; City of Los Angeles, 2016)

Table 3.15-2: Citywide Street Classification

Street Classification	Number of Lanes in Each Direction	Roadway Width (feet)	Right-of-Way Width (feet)	Sidewalk/Border Width (feet)	Target Operating Speed (mph)
Arterial Streets					
Avenue[1] I	1-2	70	100	15	35
Avenue II	1-2	56	86	15	30
Avenue III	1-2	46	72	15	25
Non-Arterial Streets					
Collector[2]	1	40	66	13	25
Local Street[3] (Standard)	1	36	60	12	20

[1]Avenues are arterial streets that pass through residential and commercial areas.
[2]Collectors are generally located in residential neighborhoods. They provide access to and from arterial streets for local traffic and are not intended for cut-through traffic.
[3]Local streets are intended to accommodate lower volumes of vehicle traffic and have parking on both sides of the street.
mph = miles per hour
Source: (City of Los Angeles, n.d.)

Figure 3.15-1: Transportation Facilities

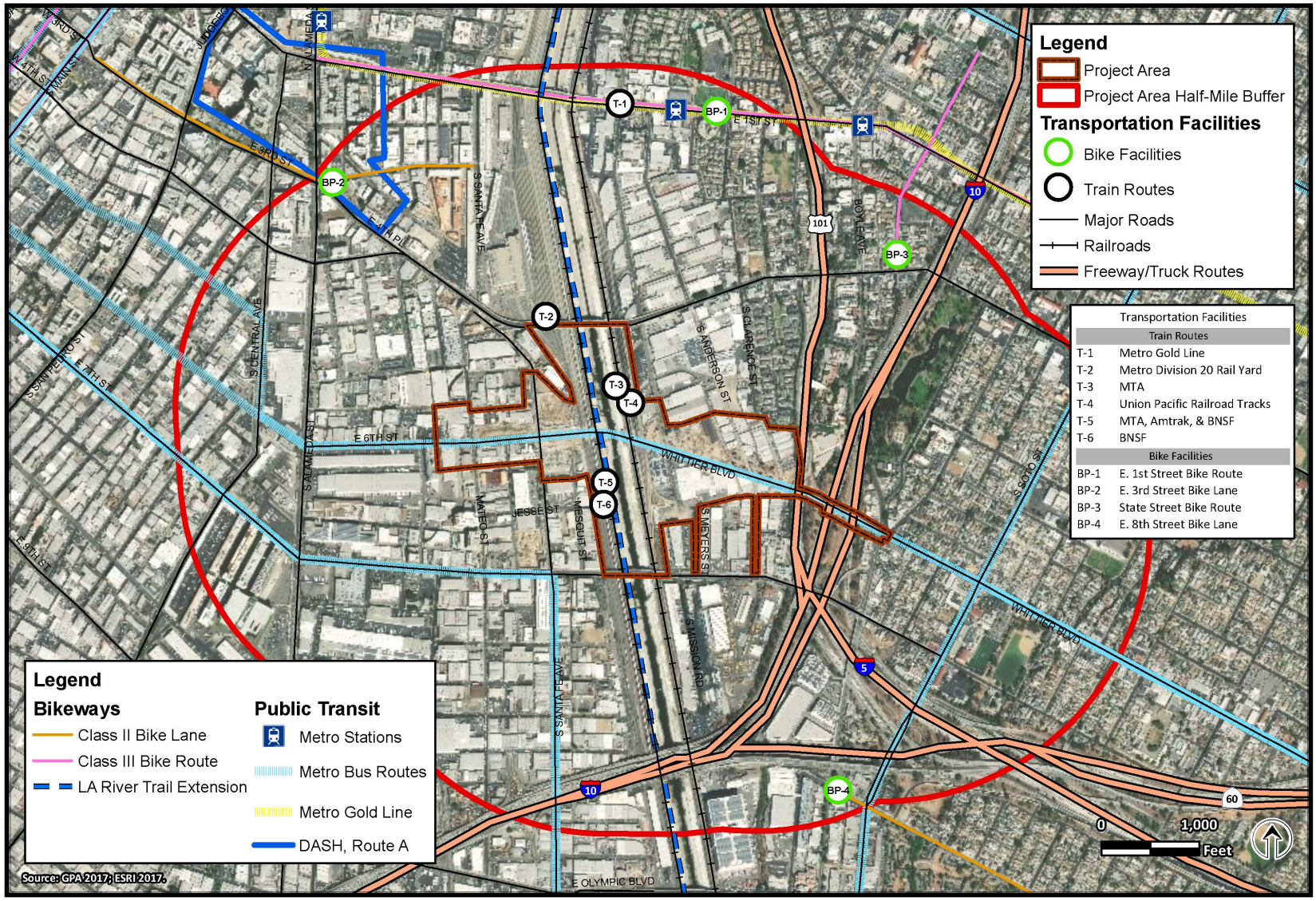


FIGURE 3.15-1: TRANSPORTATION FACILITIES
Sixth Street PARC Project

3.15.2.2 Existing Transit System and Train Routes

There are no bus stops or routes within the Project Site. The Project Area is served by LADOT Transit Services and Los Angeles County Metropolitan Transportation Authority (Metro) bus systems. Bus routes in the Project Study Area include DASH Downtown, operated by LADOT Transit Services, and Metro Routes 18, 30/330, 53, 60, 62, 251-252, 720, 751, and 760, which are described in more detail below (see **Figure 3.15-1**, Transportation Facilities):

- **DASH Downtown:** Operates several routes throughout Downtown LA. Route A travels from Little Tokyo to City West, providing services through the Arts District in proximity to the Project Area.
- **Metro Line 18:** Travels eastbound and westbound along Sixth Street through Downtown LA, providing services through Koreatown, Wilshire Center, Westlake, Boyle Heights, East Los Angeles, City of Commerce, and Montebello.
- **Metro Line 30/330:** Travels eastbound and westbound service from East Los Angeles to Beverly Hills, providing services through Boyle Heights, Downtown LA, Miracle Mile, Mid-City, and West Hollywood.
- **Metro Line 53:** Travels northbound and southbound from Downtown LA to Carson, providing services through Downtown LA, South Los Angeles, Willowbrook, and Compton.
- **Metro Line 60:** Travels northbound and southbound from Downtown LA to Downtown Long Beach, providing services through Downtown LA, Vernon, Huntington Park, South Gate, Lynwood, Compton, and Long Beach.
- **Metro Line 62:** Travels northbound and southbound from Downtown LA to Hawaiian Gardens, providing services through Downtown LA, Boyle Heights, Montebello, City of Commerce, Pico Rivera, Santa Fe Springs, Downey, Norwalk, Artesia, Cerritos, Lakewood, and Long Beach.
- **Metro Line 106:** Travels westbound and eastbound from Boyle Heights to Monterey Park, providing services through East LA.
- **Metro Line 251-252:** Travels northbound and southbound from Cypress Park to Lynwood, providing services through Montecito Heights, El Sereno, Lincoln Heights, Boyle Heights, Vernon, Huntington Park, and South Gate.
- **Metro Line 720:** A Metro Rapid line that travels eastbound and westbound from Commerce to Santa Monica, providing services through East Los Angeles, Boyle Heights, Downtown LA, Koreatown, Hancock Park, Park La Brea, Beverly Hills, Westwood, Century City, West LA, Brentwood, and Santa Monica.
- **Metro Line 751:** A Metro Rapid line that travels northbound and southbound from Cypress Park to Huntington Park, providing services through Lincoln Heights, Boyle Heights, Vernon, and South Gate.
- **Metro Line 760:** A Metro Rapid line that travels northbound and southbound from Downtown LA to Long Beach, providing services through Downtown LA, Vernon, Huntington Park, South Gate, Watts, and Lynwood.

Light rail tracks for the Metro Gold and Purple Lines, and tracks for the Metro Division 20 Rail Yard are within the Project Study Area. Union Pacific Railroad, Amtrak, and Burlington Northern Santa Fe Railway also have tracks that run along the east and west banks of the LA River in the Project Study Area. The train stations and routes located within the Project Study Area are listed in **Table 3.15-3** (see **Figure 3.15-1**, Transportation Facilities).

Table 3.15-3: Train Routes

Number	Property Name	Location	Description	Owner/Operator
T-1	Metro Gold Line (Pico/Aliso Station)	Along First Street in Los Angeles	Light rail serving Little Tokyo, Union Station, Chinatown, and Old Town Pasadena	Los Angeles Metropolitan Transportation Authority
T-2	Metro Division 20 Rail Yard	Along the west side of the Los Angeles River in Los Angeles	Tracks are used to transport rail lines to the Metro Division 20 Rail Yard for fleet maintenance	Los Angeles Metropolitan Transportation Authority
T-3	MTA Tracks	Along the east side of the Los Angeles River in Los Angeles	Tracks provide rail service in Downtown Los Angeles	Los Angeles Metropolitan Transportation Authority
T-4	Union Pacific Railroad Tracks	Along the east side of the Los Angeles River in Los Angeles	Tracks are used to ship a variety of goods, such as agricultural products, automotive, chemicals, coal, and industrial products.	Union Pacific Corporation
T-5	MTA, Amtrak, and Burlington Northern Santa Fe railway	Along the west side of the Los Angeles River in Los Angeles	Tracks are used by Metro for public transportation, Amtrak for private transportation, and Burlington Northern Santa Fe Railway for the shipment of various types of goods.	Los Angeles Metropolitan Transportation Authority, Amtrak, and Burlington Northern Santa Fe Corporation
T-6	Burlington Northern Santa Fe Tracks	Along the west side of the Los Angeles River in Los Angeles	Tracks are used to transport a variety of goods, such as clothes, food, agricultural products, automotive, industrial products, and coal.	Burlington Northern Santa Fe Corporation

Source: (GPA Consulting, 2019)

3.15.2.3 Existing Transit System and Train Routes

There are two existing Class II bike lanes and two existing Class III bike routes within the Project Study Area, but they do not connect to the Project Area. **Table 3.15-4** describes each of the bike lanes and routes (see **Figure 3.15-1**, Transportation Facilities). Within the Project Area, there are sidewalks lining the major roadways and local city streets listed in **Table 3.15-1**. Crosswalks are provided at signalized intersections.

Table 3.15-4: Bike Facilities

Location	Property Name	Address	Description	Owner/Operator
B-1	City Bike Route	Along First Street in Los Angeles	Class III	LADOT Transit Services
B-2	City Bike Lane	Along Third Street in Los Angeles	Class II	LADOT Transit Services
B-3	City Bike Route	Along South State Street in Los Angeles	Class III	LADOT Transit Services
B-4	City Bike Lane	Along East Eighth Street in Los Angeles	Class II	LADOT Transit Services

Source: (GPA Consulting, 2019)

The Los Angeles River Bike Path Gap Closure Project, identified in **Table 1-1** of this EIR, is a planned extension of existing segments of the 32-mile greenway (bicycle and pedestrian path) proposed in the Los Angeles River Revitalization Master Plan that is currently in the environmental review process (Los Angeles County Metropolitan Transportation Authority, 2019). If approved, construction is anticipated to begin in 2023. In addition, there are three proposed Active Transportation (ATP) projects that include improvements to the safety and accessibility of bicycle and/or pedestrian facilities in the vicinity of the proposed Project. The ATP projects, which are currently in design, include ATP-1: Sixth Street Viaduct Replacement Project Bicycle and Pedestrian Facilities, ATP-2: Boyle Heights Pedestrian Linkages, and ATP-3: Downtown LA Arts District Pedestrian and Cyclist Safety Project (see **Table 1-1**).

3.15.2.4 Existing Traffic Congestion and Levels of Service

Methodology

The *Traffic Impact Analysis* defines existing conditions in vicinity to Project Site (i.e., the proposed park footprint) (Kimley-Horn and Associates, Inc., 2019a). The 12 study intersections, described in **Table 3.15-5**, were defined in consultation with the LADOT (see **Figure 3.15-2,** Traffic Study Intersections).

Table 3.15-5: Study Area Intersections

Intersection Number	Northbound/ Southbound	Eastbound/ Westbound	Jurisdiction	Signalized	Signal System
1	Alameda Street	Sixth Street	City of Los Angeles	Yes	ATSAC[1]
2	Mateo Street	Sixth Street	City of Los Angeles	Yes	ATSAC
3	Alameda Street	Seventh Street	City of Los Angeles	Yes	ATSAC
4	Mateo Street	Seventh Street	City of Los Angeles	Yes	ATSAC
5	Santa Fe Avenue	Seventh Street	City of Los Angeles	Yes	ATSAC
6	Boyle Avenue	Seventh Street	City of Los Angeles	Yes	ATSAC
7	Boyle Avenue	Whittier Boulevard	City of Los Angeles	Yes	ATSAC
8	Alameda Street	Fourth Street	City of Los Angeles	Yes	ATSAC
9	Hewitt Street	Fourth Street	City of Los Angeles	No	N/A
10	Clarence Street	Fourth Street	City of Los Angeles	No	N/A
11	Santa Fe Avenue	Mateo Street	City of Los Angeles	No	N/A
12	Santa Fe Avenue	Third Street	City of Los Angeles	No	N/A

ATSAC = Automated Traffic Surveillance and Control
1. The ATSAC system allows for monitoring of intersection traffic conditions to adjust the traffic signal timing in response to changing traffic conditions. Funding for the adaptive traffic control system (ATCS) has been obtained for the project intersections and is expected to be installed prior to the build out year. The ATCS continuously detects vehicular traffic volumes to determine "optimal" signal timings based on the traffic volumes collected.
Source: (Kimley-Horn and Associates, Inc., 2019a)

Figure 3.15-2: Traffic Study Intersections

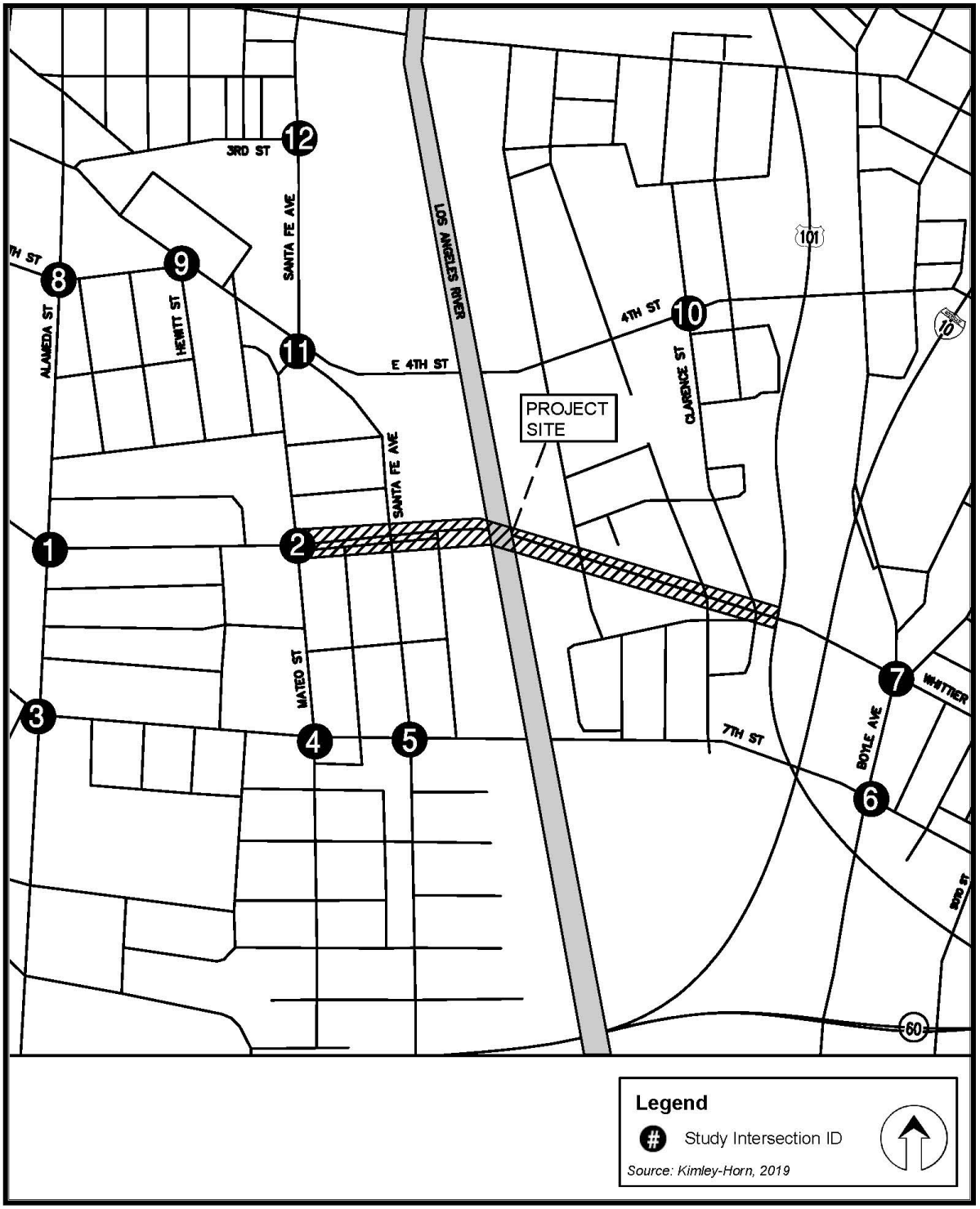


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FIGURE 3.15-2. TRAFFIC STUDY INTERSECTIONS
Sixth Street PARC Project

Peak hour traffic volumes and existing operating conditions were determined at each study intersection, based on the Transportation Research Board's Critical Movement Analysis (CMA), Circular 212 Planning Method guidelines (Institute of Transportation Engineers, 1989). The CMA method quantifies traffic operating conditions at a signalized study intersection based on the volume to capacity (V/C) ratio and the associated LOS (see **Table 3.15-6**). The V/C ratio varies from 0 to 1.000 and measures the operating capacity of a roadway or intersection based on the number of vehicles passing through divided by the theoretical number of vehicles that could pass through. The V/C ratio corresponds to LOS ranging from "A" to "F". LOS describes the quality of traffic flow, which is based on travel speed, travel time, and flow interruptions.

Table 3.15-6: Intersection LOS Definitions

V/C Value (Signalized Intersections)[1]	Related LOS Rating
0 to 0.600	A – Excellent free flow conditions
0.601 to 0.700	B – Unconstrained flow
0.701 to 0.800	C – Somewhat constrained flow, maneuverability is reduced
0.801 to 0.900	D – Constrained flow, little maneuverability
0.901 to 1.000	E – Significant vehicle queuing; not all vehicles clear intersection in one cycle
Greater than 1.000	F – Excessive delay; vehicles require more than one signal cycle to clear the intersection

1. Based upon Circular 212 methodology for signalized intersections
Source: (Kimley-Horn and Associates, Inc., 2019a)

The CMA method only applies to signalized intersections. Unsignalized intersections were not included in the impact analysis. However, in accordance with LADOT procedures, unsignalized intersections were evaluated based on the Highway Capacity Manual (HCM) method to determine the need for the installation of a traffic signal or other traffic control device (Transportation Research Board, 2010).

In accordance with LADOT analysis procedures, the V/C ratio calculated using the CMA methodology is reduced by 0.07 for all the project intersections, since they are all included in the Automated Traffic Surveillance and Control (ATSAC) system. The ATSAC system allows for monitoring of intersection traffic conditions to adjust the traffic signal timing in response to changing traffic conditions. An additional reduction of 0.03 is applied to the V/C ratio to account for improved operation due to the Adaptive Traffic Control System (ATCS), and increased efficiency from the ATSAC/ATCS system that is not captured in the CMA methodology. Funding for the ATCS has been obtained for the project intersections and the ATCS is expected to be installed prior to the build out year. The ATCS continuously detects vehicular traffic volumes to determine "optimal" signal timings based on the traffic volumes collected.

Traffic Analysis

Weekday traffic counts were conducted during the morning peak hours (7:00 to 9:00 a.m.) and evening peak hours (4:00 to 6:00 p.m.). Because traffic counts were collected in 2017, a conservative growth rate

of one percent per year was applied to calculate traffic projections for existing conditions (i.e., 2018). The year 2018 was used instead of 2017 to provide a conservative estimate for the base year. As requested by LADOT, existing conditions were determined based on the assumption that the Viaduct was in operation. Because the Viaduct was demolished in February 2016, the LOS analysis includes traffic data taken from 2014 and 2015 traffic studies to account for the Viaduct being in operation. Existing conditions are summarized in **Table 3.15-7**.

Table 3.15-7: Existing (2018) Conditions for Study Intersections

Signalized Intersections		Existing (2018) LOS Analysis Results			
		A.M. Peak Hour		P.M. Peak Hour	
		V/C Ratio	LOS	V/C Ratio	LOS
1	Alameda Street at Sixth Street	0.613	B	0.656	B
2	Mateo Street at Sixth Street	0.460	A	0.759	C
3	Alameda Street at Seventh Street	0.604	B	0.639	B
4	Mateo Street at Seventh Street	0.331	A	0.420	A
5	Santa Fe Avenue at Seventh Street	0.468	A	0.644	B
6	Boyle Avenue at Seventh Street	0.493	A	0.540	A
7	Boyle Avenue at Whittier Boulevard	0.797	C	0.824	D
8	Alameda Street at Fourth Street	0.321	A	0.574	A
Unsignalized Intersections[1]		**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**
9	Hewitt Street at Fourth Street	8.1	A	229.5	F
10	Clarence Street at Fourth Street	23.1	C	7.9	A
11	Santa Fe Avenue at Mateo Street	7.6	A	9.7	A
12	Santa Fe Avenue at Third Street	35.2	E	59.9	F

1. Highway Capacity Manual (HCM) 2000 method was used because HCM 2010 does not support this intersection lane configuration
Source: Kimley-Horn and Associates, Inc., 2019a

3.15.2.5 Existing Parking

Existing public parking in the Project Area consists of on-road street parking along many of the major roadways identified in **Table 3.15-1**. Public parking facilities within two miles of the Project Site are included in **Table 3.15-8** and **Figure 3.15-3.**

Table 3.15-8: Public Parking Facilities

Location	Property Name	Address
1	Standard Parking	1400 S Grand Ave.
2	City Center Parking	1317 S Grand Ave.
3	Joe's Auto Parks	1000 W Eighth St.
4	LAZ Parking	1150 S Grand Ave.
5	ABM	1150 S Olive St.
6	Standard Parking	801 S Figueroa St.
7	LAZ Parking	725 Grand Ave.
8	Joe's Auto Parks	808 S Olive St.
9	The Parking Spot	1112 Santee St.
10	SP+ Parking	611 W Sixth St.
11	Standard Parking	241 S Figueroa St.
12	Joe's Auto Parks	802 S Los Angeles St.
13	Joe's Auto Parks	649 Spring St.
14	Paragon Parking	710 S Spring St.
15	Joe's Auto Parks	759 S Maple Ave.
16	Joe's Auto Parks	530 S Spring St.
17	Joe's Auto Parks	212 E Seventh St.
18	City Center Parking	434 S Broadway
19	Los Angeles Garage Associates	545 S Main St.
20	SP+ Parking	208 E Sixth St.
21	Joe's Auto Parks	601 E Eighth St.
22	Paragon Parking	526 S Los Angeles St.
23	Perfect Parking, Inc.	1000 E Olympic Blvd.
24	Los Angeles Times Garage	213 S Spring St.
25	Joe's Auto Parks	334 S Main St.

Location	Property Name	Address
26	Joe's Auto Parks	243 S Spring St.
27	Joe's Auto Parks	246 S Spring St.
28	Joe's Auto Park	330 S Main St.
29	Joe's Auto Parks	220 S Spring St.
30	United Valet Parking, Inc.	216 E Fourth St.
31	Joe's Auto Parks	253 S Main St.
32	Joe's Auto Parks	231 S Main St.
33	Corner Lot (Perfect Parking, Inc.)	1251 E Olympic Blvd.
34	Toy District Garage (S.C. Prestige Parking, Inc.)	Boyd St. and Wall St.
35	Little Tokyo Library Garage/Cathedral Lot 755	237S N Los Angeles St.
36	S.C. Prestige Parking, Inc.	326 Boyd St.
37	AVA Little Tokyo (Ace Parking Management, Inc.)	S Los Angeles St. and E Second St.
38	DoubleTree by Hilton Garage	120 S Los Angeles St.
39	Weller Court (Hodes Parking, Inc.)	S Los Angeles St. and E Second St.
40	Little Tokyo Associates (SP Plus Corporation)	S San Pedro and E Third St.
41	Wakaba LA Leasing & Retail (Joe's Auto Parks)	S San Pedro and E Second St.
42	S.C. Prestige Parking, Inc.	420 Boyd St.
43	Joe's Auto Parks	350 E Second St.
44	Joe's Auto Parks	319 E Second St.
45	Japanese Village Plaza Garage	335 E Second St.
46	Parking Company of America	171 Arcadia St.
47	City of Los Angeles Lot 2	101 Judge John Aiso St.
48	Unified Parking Service, Inc.	315 E First St.
49	Joe's Auto Parks	360 E Second St.
50	El Pueblo Historical Monument - Lot 1	171 Arcadia St.
51	City of Los Angeles Lot 2	352 E Temple St.
52	Perfect Parking, Inc.	300 S Central Ave.
53	Honda Plaza Garage (Modern Parking, Inc.)	S Central Ave. and E Second St.

Location	Property Name	Address
54	El Pueblo Historical Monument - Lot 2	W Cesar Estrada Chavez Ave. and N Main St.
55	Advanced Parking Systems	401 E Second St.
56	El Pueblo Historical Monument - Lot 4	426 N Los Angeles St.
57	Best Auto Park (Little Tokyo Galleria)	333 Alameda St.
58	Perfect Parking, Inc.	360 S Alameda St.
59	El Pueblo Historical Monument - Lot 3	W Cesar Estrada Chavez Ave. and N Alameda St.
60	Perfect Parking, Inc.	713 E Third St.
61	El Pueblo Historical Monument - Lot 5	711 Alameda St.
62	Joe's Auto Parks	414 E Commercial St.
63	SP Plus Corporation	428 E Temple St.
64	SP Plus Corporation	428 E Temple St.
65	Park Little Tokyo	129 S Hewitt St.
66	Japanese Catholic Center	222 S Hewitt St.
67	Perfect Parking, Inc.	830 Traction Ave.
68	Fourth & Traction Garage	963E E Fourth St.
69	Sixth St and Factory Pl	Sixth St. and Factory Pl.
70	Palmetto Lot	1250 Palmetto St.
71	Union Station MTA Garage - Gateway Center	1 Gateway Plaza
72	Jesse St and Mateo St	660 Mateo St.
73	Advanced Parking Systems	740 E Temple St.
74	Perfect Parking	905S Santa Fe Ave.
75	Boyle Heights City Hall	2127E E Second St.
76	LADOT Facility No. 713	247N S Chicago St.
77	LADOT Facility No 682	318N N Breed St.
88	Metro Gold Line - Indiana Station Park & Ride	210 S Indiana St.

Source: (GPA Consulting, 2019)

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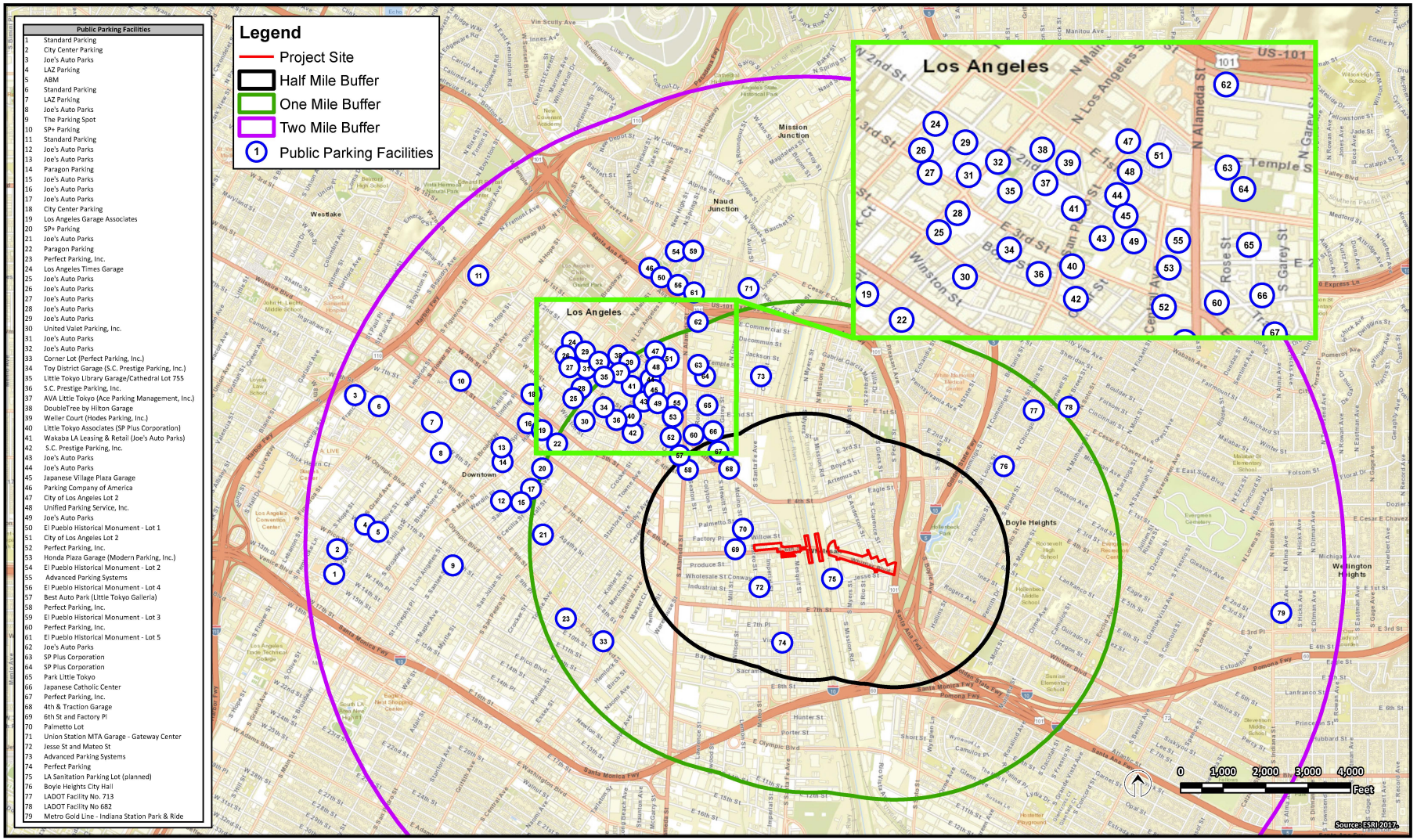
Figure 3.15-3: Public Parking Facilities



Public Parking Facilities	
1	Standard Parking
2	City Center Parking
3	Joe's Auto Parks
4	LAZ Parking
5	ABM
6	Standard Parking
7	LAZ Parking
8	Joe's Auto Parks
9	The Parking Spot
10	SP+ Parking
11	Standard Parking
12	Joe's Auto Parks
13	Joe's Auto Parks
14	Paragon Parking
15	Joe's Auto Parks
16	Joe's Auto Parks
17	Joe's Auto Parks
18	City Center Parking
19	Los Angeles Garage Associates
20	SP+ Parking
21	Joe's Auto Parks
22	Paragon Parking
23	Perfect Parking, Inc.
24	Los Angeles Times Garage
25	Joe's Auto Parks
26	Joe's Auto Parks
27	Joe's Auto Parks
28	Joe's Auto Parks
29	Joe's Auto Parks
30	United Valet Parking, Inc.
31	Joe's Auto Parks
32	Joe's Auto Parks
33	Corner Lot (Perfect Parking, Inc.)
34	Toy District Garage (S.C. Prestige Parking, Inc.)
35	Little Tokyo Library Garage/Cathedral Lot 755
36	S.C. Prestige Parking, Inc.
37	AVA Little Tokyo (Ace Parking Management, Inc.)
38	DoubleTree by Hilton Garage
39	Weller Court (Hodes Parking, Inc.)
40	Little Tokyo Associates (SP Plus Corporation)
41	Wakaba LA Leasing & Retail (Joe's Auto Parks)
42	S.C. Prestige Parking, Inc.
43	Joe's Auto Parks
44	Joe's Auto Parks
45	Japanese Village Plaza Garage
46	Parking Company of America
47	City of Los Angeles Lot 2
48	Unified Parking Service, Inc.
49	Joe's Auto Parks
50	El Pueblo Historical Monument - Lot 1
51	City of Los Angeles Lot 2
52	Perfect Parking, Inc.
53	Honda Plaza Garage (Modern Parking, Inc.)
54	El Pueblo Historical Monument - Lot 2
55	Advanced Parking Systems
56	El Pueblo Historical Monument - Lot 4
57	Best Auto Park (Little Tokyo Galleria)
58	Perfect Parking, Inc.
59	El Pueblo Historical Monument - Lot 3
60	Perfect Parking, Inc.
61	El Pueblo Historical Monument - Lot 5
62	Joe's Auto Parks
63	SP Plus Corporation
64	SP Plus Corporation
65	Park Little Tokyo
66	Japanese Catholic Center
67	Perfect Parking, Inc.
68	4th & Traction Garage
69	6th St and Factory Pl
70	Palmetto Lot
71	Union Station MTA Garage - Gateway Center
72	Jesse St and Mateo St
73	Advanced Parking Systems
74	Perfect Parking
75	LA Sanitation Parking Lot (planned)
76	Boyle Heights City Hall
77	LADOT Facility No. 713
78	LADOT Facility No 682
79	Metro Gold Line - Indiana Station Park & Ride

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Figure 3.15-3: PUBLIC PARKING FACILITIES
Sixth Street PARC Project

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3.15.3 Environmental Impact Analysis

3.15.3.1 Methodology and Assumptions

Vehicle Miles Traveled

Pursuant to the requirements of SB 743 and LADOT's Transportation Assessment Guidelines (July 2020), the City implemented a VMT approach to analyzing traffic impacts. According to the screening criteria outlined in the LADOT's TAG, a VMT analysis is warranted if a development project is expected to generate a net increase of 250 or more daily vehicle trips (Los Angeles Department of Transportation, 2020). The proposed Project is expected to generate 177 trips; however, once the existing land use credit is applied, the proposed Project would result in 159 less daily trips than the existing industrial land use (see Section 3.15.3.5 for additional information). Therefore, this project's recreational land use and low trip generation do not meet the land use designations or trip generation thresholds required for a VMT analysis. In addition, the proposed Project is primarily expected to serve the recreational needs of the local surrounding communities rather than be a regional generator of traffic. Regarding special events, which may occasionally have a regional draw a few times a year (see **Table 2-1** in Chapter 2 of this EIR for anticipated size and frequency of events), large event permittees would be required to develop traffic control plans that address parking and circulation to minimize congestion.

Trip Generation and Trip Distribution

Weekday daily a.m. and p.m. peak hour trips were estimated for the proposed Project using trip generation rates from the *ITE Trip Generation, 9th Edition*. When estimating trip generation, an existing land use credit was applied because the proposed Project would replace approximately 223,900 square feet of heavy industrial land use. Trip generation was submitted to and approved by the LADOT as part of the MOU (Los Angeles Department of Transportation, 2018).

The proposed Project Site would host events with estimated event capacities between 25 people and 5,000 people. These events were analyzed separately from the trip generation estimates because they would not represent the number of trips for a typical day. Smaller events such as recreational games and farmer's markets are estimated to occur approximately once or twice a week. Larger events such as concerts, festivals, and soccer tournaments with estimated capacities greater than 1,000 people would each occur approximately one to two times per year. Therefore, the study analyzed a 2,000-person event during a typical weekday p.m. peak hour to represent a worst-case conservative scenario that would encompass a single, large event that could occur infrequently as well as multiple, simultaneous small events that could occur weekly.

For weekday evening events, it was assumed that attendees would arrive during the p.m. peak period. Weekday evening events would start around 7 p.m. and 25 percent of attendees would arrive by 6 p.m. An average vehicle occupancy of two persons per vehicle was assumed for a conservative estimate. Trip generation for special events were submitted to and approved by the LADOT under the MOU (Kimley-Horn and Associates, Inc., 2019a).

Incoming and outgoing project trip distribution were projected for the 12 study intersections. These estimates were used to calculate the potential trip distribution for weekday evening events. Trip

distribution was submitted to and approved by the LADOT as part of the MOU (Kimley-Horn and Associates, Inc., 2019a).

Parking

The ITE *Parking Generation, 4th Edition* is an informational report that has been adopted in many areas as the standard for parking requirements (Institute of Transportation Engineers, 2010). *Parking Generation* specifies the off-street parking requirements for a variety of land uses, which include land uses such as "Soccer Complex," "Coffee Shop," and "City Park." According to the *Parking Demand Analysis*, parking demand for the proposed Project for a typical weekday and weekend were estimated based on the parking rates in *Parking Generation* (Kimley-Horn and Associates, Inc., 2019b).

Three parking analysis scenarios were considered. Scenario 1 classified the entire project area under the "City Park" land use designation. The total parking demand for Scenario 1 was calculated based on the total acreage of the Project Site (approximately 13 acres). Scenario 2 calculated the parking demand for the project using the "Soccer Complex" land description based on the number of soccer fields (two fields). The "City Park" land use is more appropriate based on the project description; however, the "Soccer Complex" represents a conservative estimate for daily parking demand at the Project Site because of the higher parking demand rate. Scenario 3 calculated the parking demand when the park hosts a special event.

According to Section 12.21A.4 of the City of Los Angeles Municipal Code (LAMC), parking spaces located within 1,500 feet of a fixed rail station, bus station, or other similar transit facility, may replace up to 30 percent of the required automobile parking spaces with bicycle spaces at a ratio of one parking space for every four bicycle spaces provided. The following existing Metro bus stops are within 1,500 feet of the proposed project site: Sixth Street/Alameda Street, Seventh Street/Mateo Street, and Seventh Street/South Santa Fe Street, and Seventh Street/South Anderson Street. This parking study replaced 30 percent of the required parking spaces with bicycle parking spaces.

Level of Service

The *Traffic Impact Analysis* included the following scenarios to analyze traffic conditions (Kimley-Horn and Associates, Inc., 2019a):

1. Existing (2018) With Project Conditions
2. Existing (2018) With Project Event Conditions
3. Cumulative (2023) Without Project Conditions
4. Cumulative (2023) With Project Conditions
5. Cumulative (2023) With Project Event Conditions

A Memorandum of Understanding (MOU) was developed between the City and LADOT, which outlined all the study assumptions, growth rate, and project trip generation and distribution (Los Angeles Department of Transportation, 2018). The MOU is included as an appendix to the *Traffic Impact Analysis* (Kimley-Horn and Associates, Inc., 2019a). As described in Section 3.15.2.2, traffic conditions were analyzed at 12 study intersections (see **Table 3.15-5** and **Figure 3.15-2**). Peak hour traffic volumes and existing operating conditions were determined at each study intersection, based on the Transportation

Research Board's CMA, Circular 212 Planning Method guidelines. In accordance with the CMA method, traffic operating conditions at a signalized study intersection were quantified based on the V/C ratio and associated LOS (see Section 3.15.2.2 for additional information).

Traffic count data was collected in March 2017. As requested by LADOT, Existing (2018) Conditions were estimated with the assumption that the Viaduct was in operation. Because the Viaduct was demolished in February 2016, traffic count data from 2014 to 2015 traffic studies was utilized to supplement counts collected in 2017. To be conservative, a growth rate of one percent was applied to count data collected in 2014 and 2017 to obtain 2018 traffic volumes for Existing (2018) Conditions.

Existing (2018) With Project Conditions adds the estimated proposed Project traffic to the existing base conditions, which were used to evaluate the net change in traffic conditions. Existing (2018) With Project Event Conditions add the estimated event traffic to the existing base conditions, which were used to evaluate the net change in traffic conditions and to identify potential traffic impacts associated with events hosted at the proposed Project.

Per the Los Angeles County Congestion Management Program, traffic volumes in Los Angeles are forecast to increase by a growth factor of 1.011 from 2010 to 2023. Therefore, a growth factor of 1.011 was applied to 2018 volumes in order to calculate potential traffic projections for Cumulative (2023) scenarios, which was approved by LADOT (Los Angeles Department of Transportation, 2018).

3.15.3.2 Screening Analysis

Several impacts and corresponding thresholds of significance in the following section were eliminated from further analysis in this EIR. Topics were eliminated if the Initial Study for the proposed Project concluded there would be "No Impact," or if impacts were identified to be "Less Than Significant… and will not be discussed further in the EIR." Therefore, only the topics described in the section below were determined to require further analysis in this EIR. A copy of the Initial Study, which contains the eliminated topics, is provided in **Appendix A**.

3.15.3.3 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, the *L.A. CEQA Thresholds Guide*, and the City of Los Angeles Transportation Assessment Guidelines, the proposed Project would have a significant impact on Transportation if it would:

T-1: Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

T-2.1: For a land use project, would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)(1)? Would the project cause substantial vehicle miles traveled?

T-3: Substantially increase hazards due to a geometric design feature or incompatible use.

T-4 Conflict with an applicable congestion management program, including, but not limited to, level-of-service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways.

L.4 Neighborhood Intrusion Impacts. A project would normally have a significant neighborhood intrusion impact if project traffic increases the average daily traffic (ADT) volume on a local residential street in an amount equal to or greater than the following:

- ADT increase ≥ 16% if final ADT* <1,000
- ADT increase >12% if final ADT* >1,000 and <2,000
- ADT increase >10% if final ADT* >2,000 and <3,000
- ADT increase >8% if final ADT* >3,000

∗ "Final ADT" is defined as total projected future daily volume including project, ambient, and related project growth.

The significance of neighborhood intrusion impacts related to vehicle delay shall be determined on a case-by-case basis.

L.7 Parking. A project would normally have a significant impact on parking if the project provides less parking than needed as determined through an analysis of demand from the project.

*L.8 In-Street Construction Impacts***.** The determination of significance shall be made on a case-by-case basis, considering the following factors:

- Temporary Traffic Impacts
  - The length of time of temporary street closures or closures of two or more traffic lanes.
  - The classification of the street (major arterial, state highway) affected.
  - The existing traffic levels and level of service (LOS) on the affected street segments and intersections.
  - Whether the affected street directly leads to a freeway on- or off-ramp or other state highway.
  - Potential safety issues involved with street or lane closures.
  - The presence of emergency services (fire, hospital, etc.) located nearby that regularly use the affected street.
- Temporary Loss of Access
  - The length of time of any loss of vehicular or pedestrian access to a parcel fronting the construction area.
  - The availability of alternative vehicular or pedestrian access within ¼ mile of the lost access.
  - The type of land uses affected, and related safety, convenience, and/or economic issues.
- Temporary Loss of Bus Stops or Rerouting of Bus Lines
  - The length of time that an existing bus stop would be unavailable or that existing service would be interrupted;
  - The availability of a nearby location (within 0.25 mile) to which the bus stop or route can be temporarily relocated;

  - The existence of other bus stops or routes with similar routes/destinations within a 0.25 mile radius of the affected stops or routes; and
  - Whether the interruption would occur on a weekday, weekend or holiday, and whether the existing bus route typically provides service that/those day(s).

- Temporary Loss of On-Street Parking
  - The current utilization of existing on-street parking;
  - The availability of alternative parking locations or public transit options (e.g. bus, train) within 0.25 mile of the project site; and
  - The length of time that existing parking spaces would be unavailable.

3.15.3.4 Construction Impacts

T-1: Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

Construction vehicles or equipment along the roadways surrounding the construction site may result in temporary impacts to the circulation system. Traffic volumes along roadways in the Project Area typically average several thousand vehicle trips per day. Based on the *Traffic Impact Analysis* prepared for the proposed Project, construction activities would generate up to approximately 80 trips per day (Kimley-Horn and Associates, Inc., 2019a). However, construction-generated traffic would be dispersed over multiple roadways. In addition, construction vehicles and equipment on the roadways surrounding the construction site would only be present for the short-term and would be removed following construction. Construction related trip would also be scheduled with increased frequency during off-peak hours.

Adopted policies, plans, and programs supporting alternative transportation include AB 1358 California Complete Streets Act, SB 743, Los Angeles Mobility Plan 2035, LAMC the Complete Streets Design Guide (see Section 3.15.1 for additional information), Vision Zero Action Plan, Citywide Design Guidelines, and the local community plans for Downtown LA and Boyle Heights. During proposed construction activities, temporary detours would be provided for any affected pedestrian and bicycle facilities. Because there are no bus stops or routes within the Project Site, public transportation facilities would not be affected. Therefore, construction activities would not conflict with adopted policies, plans, or programs supporting alternative transportation, and impacts would be less than significant.

T-4: Conflict with an applicable congestion management program, including, but not limited to, level-of-service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways.

During proposed construction activities, personnel, materials, and machinery would utilize the local street and freeway system to access the Project Site. Construction vehicles or equipment along the roadways surrounding the construction site may result in temporary impacts to the circulation system (e.g., temporary road closures, slow-moving construction vehicles, and temporarily obstructed sidewalks and roadways).

Temporary road closures would be required for the proposed improvements to two arterial streets (Santa Fe Avenue and Mission Road) and two local streets (Anderson Street and Clarence Street). Each

street closure is anticipated to last approximately two to four weeks. Alternate routes and detours for pedestrians, bicyclists, and vehicles would be provided. Streets would re-open following construction, and the proposed Project would not result in any permanent closures.

Traffic volumes along roadways in the Project Area typically average several thousand vehicle trips per day. As described in **Section 3.15.2.2**, there are known capacity issues at a few of the signalized and unsignalized study intersections: Boyle Avenue/Whittier Boulevard, Hewitt Street/Fourth Street, and Santa Fe Avenue/Third Street operate at LOS D or worse during the p.m. peak hour.

The CMP TIA Guidelines indicate that if a proposed project would add 50 or more peak hour trips (during the peak hour of adjacent street traffic) to a CMP arterial intersection, then a CMP arterial intersection analysis must be conducted. Alameda Street is a CMP arterial, with a monitoring station at Washington Street south of the Project Site.

Based on the *Traffic Impact Analysis* prepared for the proposed Project, construction activities would generate up to approximately 80 trips per day (Kimley-Horn and Associates, Inc., 2019a). However, construction-generated traffic would be dispersed over multiple roadways and the vehicles trips would be distributed throughout the day (i.e., not all 80 trips would occur during the a.m. or p.m. peak hours). Construction vehicles and equipment on the roadways surrounding the construction site would only be present for the short-term and would be removed following construction. In addition, construction-related trips would be scheduled with increased frequency during off-peak hours to minimize delays and obstructions to commuters. Therefore, construction-related trips are not anticipated to generate new capacity issues or contribute to existing capacity issues.

The number of construction workers traveling to the Project Site would vary throughout the construction process. Because proposed construction activities would take place between 7:00 a.m. and 9:00 p.m. on a typical weekday, construction worker traffic would likely occur during the morning and afternoon peak commute hours. However, the number of construction workers traveling to the Project Site would be considered negligible, when compared to the existing traffic volumes. As discussed in Section 3.2 (Air Quality), the City would offer ride-share and transit incentives for construction workers to consolidate the number of daily trips taken by construction workers.

Proposed construction activities would generate up to approximately 80 trips per day. However, impacts associated with construction-related trips (i.e., trucks and construction employees) on the street system are anticipated to be negligible because these trips would be scheduled with increased frequency during off-peak hours. In addition, construction-generated traffic would be dispersed over multiple roadways and distributed throughout the day (i.e., not all 80 trips would occur during the a.m. or p.m. peak hours). Construction vehicles and equipment on the roadways surrounding the construction site would only be present for the short-term and would be removed following construction. Therefore, the proposed Project would not conflict with an applicable congestion management program, including, but not limited to LOS standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways. Impacts would be less than significant and mitigation would not be required.

Because construction-related trips on the street system would be negligible, the proposed Project would not exceed the capacity of the existing circulation system, based on an applicable measure of

effectiveness taking into account all relevant components of the circulation system. Therefore, impacts would be less than significant and mitigation would not be required.

Temporary Traffic Impacts

Construction staging would occur entirely within the Project Site. However, construction of the proposed Project would require the movement of construction equipment and vehicles to and from the construction site, which may temporarily reduce pedestrian, bicycle, and vehicle access throughout the Project Area. Construction-related trips would be scheduled with increased frequency during off-peak hours to minimize traffic impacts. Construction vehicles and equipment would be removed following construction, and pedestrian, bicycle, and vehicle access would be restored.

Temporary road and sidewalk closures would be required for the proposed improvements to two arterial streets (Santa Fe Avenue and Mission Road) and two local streets (Anderson Street and Clarence Street). Within the Project Area, none of these streets directly leads to freeway on- or off-ramps or other state highways. Each street closure is anticipated to last approximately two to four weeks. Alternate routes and detours for pedestrians, bicyclists, and vehicles would be provided (**BMP-TRANS-1**). Streets would re-open following construction, and the proposed Project would not result in any permanent closures.

The nearest emergency services, including police and fire stations, are over 0.5 mile from the Project Site, and the nearest hospitals are over 0.3 mile from the Project Site. The nearest Los Angeles Fire Department (LAFD) responders and Los Angeles Police Department (LAPD) stations would be notified to coordinate emergency response routing during construction, and detour routes would be provided for all street closures. As discussed above, construction-related trips would be scheduled with increased frequency during off-peak hours to minimize congestion that could delay emergency vehicles. Therefore, emergency services would not be substantially affected by construction of the proposed Project.

Construction could pose hazards to pedestrians, bicyclists, and motorists traveling around the construction site, such as falling objects, the movement of construction vehicles, and unstable ground surfaces. A construction staging plan would be developed to reduce impacts related to noise, dust, traffic, and other health hazards **(BMP-TRANS-2)**. The construction site BMPs (e.g., fencing, signs, and detours) would be implemented to minimize hazards and prevent safety issues on the roadways and sidewalks surrounding the construction site.

Table 3.15-5 summarizes existing LOS for the 12 study intersections. As discussed above, traffic impacts from construction-related trips would be negligible. Trips would be scheduled with increased frequency during off-peak hours, and construction-related trips are not expected to substantially impact existing LOS. Therefore, impacts would be less than significant with implementation of mitigation measures.

Temporary Loss of Access

The Project Site is primarily surrounded by industrial properties. Because many of the properties in the vicinity of the Project Site were vacated as part of the Viaduct Replacement Project, the proposed Project would not result in a loss of access to any additional property. If proposed construction activities would result in temporary or permanent loss of access to existing parcels, then temporary access and/or construction of new access points would be provided. As discussed above, detour routes would be provided to maintain access throughout the Project Area during any road closures. Therefore, impacts would be less than significant.

Temporary Loss of Bus Stops or Rerouting of Bus Lines

There are no bus stops or routes on streets where road closures would occur, and bus stops and routes in proximity to the proposed Project would continue to be available. The proposed Project would not result in the temporary or permanent closure of bus stops, the interruption of bus services, or the relocation of bus routes. Therefore, impacts would be less than significant, and mitigation would not be required.

Temporary Loss of On-Street Parking

The Project Area is currently a construction site for the Viaduct Replacement Project, with available street parking, some of which has been temporarily removed to construct the falsework for the Viaduct. On-street parking spaces along the streets adjacent to the Project Site would be impacted during construction of the proposed Project as summarized below:

- **Anderson Street:** Existing street parking is available along both sides of Anderson Street adjacent to the Project Site, but it is limited due to existing driveway curb cuts and fire hydrants. As part of the proposed Project, most of the street parking along the western side of the roadway would be eliminated with the construction of proposed angled parking, which would push the sidewalk into the existing street parking zone. This would not only allow for construction of the proposed angled parking but would also provide an American with Disabilities Act (ADA) accessible sidewalk connection to the existing sidewalk to the north. The existing sidewalk does not connect to the northern sidewalk due to an elevated platform in front of an existing building to the north that separates the pathways. Lost street parking spaces would be offset by the added angled parking; however, most of the spaces would be reserved for City staff. Although proposed curb cuts and the elevated crosswalk would impact street parking along the eastern side of the street, the available street parking would be similar to the existing condition with the reconstruction of the curb and sidewalk to remove multiple existing curb cuts that would no longer be in use.
- **Mission Road:** Existing street parking is available along both sides of Mission Road adjacent to the Project Site. As part of the proposed Project, new curb and a multi-use path would be constructed along the western side of the road to match the proposed improvements of the separate ATP Cycle 1 project (ATP Cycle 1 includes active transportation elements consisting of sidewalk and bike lane improvements, concrete American with Disabilities Act [ADA] ramps at intersections, continental striping, and lighting). New curb and sidewalk would also be constructed along the eastern side of the road. Existing driveways that served the previous improvements would be removed. However, street parking would be available along portions of the roadway adjacent to the Project.
- **Santa Fe Avenue:** Existing parking spaces immediately adjacent to the Project site along Santa Fe Avenue are limited (approximately seven spaces). The proposed Project would include new curb and sidewalk construction along the roadway to match the existing conditions north and south of the Project Site. Street parking adjacent to the proposed Project along Santa Fe Avenue would be eliminated by the separate Active Transportation Program (ATP) Cycle 3 project to allow for the construction of bike lanes along Santa Fe Avenue (ATP Cycle 3 includes pedestrian and cyclist safety, access, and connectivity improvements, including cycle tracks/bike lanes/bike routes; new/widened sidewalks with curb extensions; high visibility and raised crosswalks; traffic-controlled

intersections; shade trees; pedestrian lighting; wayfinding signage; and alley conversion into a Shared Street connecting to the proposed Arts Plaza).

- **Clarence Street:** Existing street parking is available along both sides of Clarence Street adjacent to the Project Site, but it is limited by existing driveway curb cuts. While proposed curb cuts and an elevated crosswalk would impact street parking along both sides of the street, the available street parking would be similar to the existing condition with the reconstruction of the curb and sidewalk to remove multiple existing curb cuts that would no longer be in use.

During proposed construction activities, street parking on other roadways within 0.25 mile of the Project Site would continue to remain available (see **Table 3.15-1**). In addition, the following existing transit lines that are near the proposed Project Site would continue to be available:

- Metro Local and Limited Lines (18, 53, 60, 62, 106, 720, 760) (Bus) (all within 0.5 mile of project)
- Metro DASH Line A (Bus) (0.4 mile from project)

Therefore, impacts would be less than significant and mitigation is not required.

3.15.3.5 Operational Impacts

T-1: Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

Adopted policies, plans, and programs supporting alternative transportation include AB 1358 California Complete Streets Act, SB 743, Los Angeles Mobility Plan 2035, Los Angeles Municipal Code (LAMC) the Complete Streets Design Guide (see Section 3.15.1 for additional information), Vision Zero Action Plan, Citywide Design Guidelines, and the local community plans for .

The objectives for the proposed Project include encouraging active modes of transportation and public transit. To meet these objectives and support alternative transportation, the proposed Project would include the following features:

- Bike/pedestrian ramps to provide connections to the upcoming Sixth Street Viaduct;
- Bike racks; and
- Space for future secure bike parking and a future Metro bikeshare.

The project will provide short-term and long-term bicycle parking consistent with LAMC requirements. To address plans and policies promoting pedestrian safety, the project will include pedestrian paths, bicycle paths and connections, park lighting, pedestrian street lighting on Santa Fe Avenue, Anderson Street, and South Clarence Street. Additionally, connectivity improvements may also include but are not limited to a pedestrian activated crosswalk signal on Santa Fe Avenue, a speed table at the continental crosswalk on Santa Fe Avenue, and speed-tables with solar-powered rectangular rapid flashing beacons at South Clarence Street, Mission Road, and South Anderson Street.

Therefore, the proposed Project would be consistent with adopted policies, plans, and programs addressing circulation and supporting alternative transportation and pedestrian safety.

A project would result in significant impacts on a signalized intersection if the conditions in **Table 3.15-9** are met. Based on these criteria, the proposed Project would not result in a significant impact at an

intersection if it operates at LOS D after the addition of the proposed Project traffic and the incremental change in V/C is less than 0.020. However, if the intersection is operating at LOS F after the addition of the proposed Project traffic and the V/C ratio is 0.010 or greater, the proposed Project would result in significant impacts.

Table 3.15-9: City Significant Impact Criteria

LOS	V/C Ratio	Project Related Increase in V/C Ratio
C	>0.701-0.800	Equal to or greater than 0.040
D	>0.801-0.900	Equal to or greater than 0.020
E	>0.901-1.00	Equal to or greater than 0.010
F	Greater than 1.000	Equal to or greater than 0.010

Source: (Los Angeles Department of Transportation, 2020)

Existing (2018) With Project conditions are summarized in **Table 3.15-10** and Existing (2018) With Project Event conditions are summarized in **Table 3.15-11**. Based on the results of the LOS analysis, the proposed Project would not result in a significant change in traffic conditions from existing conditions. In addition, an event hosted at the proposed Project would not result in a significant change in traffic conditions from existing conditions.

Two unsignalized intersections (9 and 12) would continue to operate at LOS F under Existing (2018) With Project and Existing (2018) With Project Event conditions. These intersections were evaluated, and it was determined that these intersections do not warrant traffic signals (Kimley-Horn and Associates, Inc., 2019a).

Based on the City's significant traffic impact criteria, the proposed Project would not exceed the capacity of the existing circulation system during a typical day. Although large special events would increase the number of trips generated, these trips would occur infrequently (approximately once every six months). In addition, large event permittees would be required to implement site-specific traffic control plans to improve circulation and minimize congestion. Therefore, the proposed Project would not exceed the capacity of the existing circulation system during large special events. Impacts would be less than significant and mitigation would not be required.

Table 3.15-10: Existing (2018) With Project Conditions for Study Intersections

Signalized Intersections		Existing (2018) Without Project LOS Analysis Results				Existing (2018) With Project LOS Analysis Results				Change in V/C		Significant Impact?	
		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour					
		V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	A.M.	P.M.	A.M.	P.M.
1	Alameda Street at Sixth Street	0.613	B	0.656	B	0.612	B	0.655	B	-0.001	-0.001	No	No
2	Mateo Street at Sixth Street	0.460	A	0.759	C	0.459	A	0.758	C	-0.001	-0.001	No	No
3	Alameda Street at Seventh Street	0.604	B	0.639	B	0.603	B	0.637	B	-0.001	-0.002	No	No
4	Mateo Street at Seventh Street	0.331	A	0.420	A	0.331	A	0.419	A	0.000	-0.001	No	No
5	Santa Fe Avenue at Seventh Street	0.468	A	0.644	B	0.467	A	0.641	B	-0.001	-0.003	No	No
6	Boyle Avenue at Seventh Street	0.493	A	0.540	A	0.489	A	0.531	A	-0.004	-0.009	No	No

7	Boyle Avenue at Whittier Boulevard	0.797	C	0.824	D	0.796	C	0.822	D	-0.001	-0.002	No	No
8	Alameda Street at Fourth Street	0.321	A	0.574	A	0.321	A	0.573	A	0.000	-0.001	No	No
Unsignalized Intersections		**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Signal Warrant Analysis Required?**			
9	Hewitt Street at Fourth Street[1]	8.1	A	229.5	F	8.1	A	228.4	F	Yes			
10	Clarence Street at Fourth Street	23.1	C	7.9	A	22.7	C	7.6	A	No			
11	Santa Fe Avenue at Mateo Street	7.6	A	9.7	A	7.6	A	9.7	A	No			
12	Santa Fe Avenue at Third Street	35.2	E	59.9	F	34.7	D	57.5	F	Yes			

1. HCM 2000 method was used because HCM 2010 does not support this intersection lane configuration
Source: (Kimley-Horn and Associates, Inc., 2019a)

Table 3.15-11: Existing (2018) With Project Event Conditions for Study Intersections

Signalized Intersections		Existing (2018) Without Project LOS Analysis Results		Existing (2018) With Project LOS Analysis Results		Change in V/C	Significant Impact?
		P.M. Peak Hour		P.M. Peak Hour			
		V/C Ratio	LOS	V/C Ratio	LOS	P.M.	P.M.
1	Alameda Street at Sixth Street	0.656	B	0.659	B	0.003	No
2	Mateo Street at Sixth Street	0.759	C	0.758	C	-0.001	No
3	Alameda Street at Seventh Street	0.639	B	0.641	B	0.002	No
4	Mateo Street at Seventh Street	0.420	A	0.427	A	0.007	No
5	Santa Fe Avenue at Seventh Street	0.644	B	0.649	B	0.005	No
6	Boyle Avenue at Seventh Street	0.540	A	0.563	A	0.023	No
7	Boyle Avenue at Whittier Boulevard	0.824	D	0.822	D	-0.002	No
8	Alameda Street at Fourth Street	0.574	A	0.579	A	0.005	No
Unsignalized Intersections		**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Signal Warrant Analysis Required?**	
9	Hewitt Street at Fourth Street[1]	229.5	F	219.5	F	Yes	
10	Clarence Street at Fourth Street	7.9	A	7.8	A	No	
11	Santa Fe Avenue at Mateo Street	9.7	A	10.1	B	No	
12	Santa Fe Avenue at Third Street	59.9	F	60.1	F	Yes	

1. HCM 2000 method was used because HCM 2010 does not support this intersection lane configuration
Source: (Kimley-Horn and Associates, Inc., 2019a)

T-2.1: For a land use project, would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)(1)? Would the project cause substantial vehicle miles traveled?

The proposed Project is expected to generate 177 trips; however, once the existing land use credit is applied, the proposed Project would result in 159 less daily trips than the existing industrial land use (see Section 3.15.3.5 for additional information). The proposed Project is primarily expected to serve the recreational needs of the local surrounding communities rather than be a regional generator of traffic. Regarding special events, which may occasionally have a regional draw a few times a year (see **Table 2-1** in Chapter 2 of this EIR for anticipated size and frequency of events), large event permittees would be required to develop traffic control and transit plans that address parking and circulation to minimize congestion and inform visitors of transit options to access events. Therefore, the proposed Project would not cause substantial VMT.

T-3: Substantially increase hazards due to a geometric design feature or incompatible use.

Primary pedestrian access would be provided via the streets adjacent to the project areas. Visitors and employees arriving to the Project site by bicycle would have the same access opportunities as pedestrians. Pedestrian entrances would be separate from vehicular driveways. The driveways would be designed to City standards and provide adequate sight distance, sidewalks, and pedestrian movement controls that meet the City's requirements to protect pedestrian safety. Additionally, the project would provide access to on-site parking located on Anderson Street and street parking located at Mateo Street, Mission Road, Anderson Street, and Clarence Street. Street traffic from adjacent industrial uses would be calmed through the use of speed tables and pedestrian crossings with rectangular rapid flashing beacons at the crossings at South Clarence Street, Mission Road, and South Anderson Street to address pedestrian safety. A speed table is also proposed at the Santa Fe Avenue crossing. Therefore, the proposed Project would not substantially increase hazards due to a geometric design feature or incompatible use. Impacts would be less than significant and mitigation would not be required.

T-4: Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.

As discussed in Section 3.15.3.4, the CMP TIA Guidelines indicate that if a proposed project would add 50 or more peak hour trips (during the peak hour of adjacent street traffic) to a CMP arterial intersection, then a CMP arterial intersection analysis must be conducted. Alameda Street is a CMP arterial, with a monitoring station at Washington Street south of the Project Site.

As discussed in Section 3.15.3.1, trip generation for the proposed Project was estimated using rates from the ITE *Trip Generation, 9th Edition*. The proposed Project would attract visitors to the Project Area. According to the *Traffic Impact Analysis*, the proposed Project would generate approximately 177 new daily trips, with 81 new trips generated during the a.m. peak hour and 68 new trips during the p.m. peak hour. The proposed Project would replace approximately 223,900 square feet of heavy industrial land use. The existing heavy industrial land use generates approximately 336 daily trips, with 115 trips generated in the a.m. peak hour and 153 in the p.m. peak hour. After subtracting the number of trips generated from the existing land use, the proposed Project would generate 159 fewer daily trips (34 in the a.m. peak hour and 85 in the p.m. peak hour) than the existing industrial land use.

During a typical day, the proposed Project would generate fewer trips than the trips generated by the existing industrial land use. Therefore, the proposed Project is projected to add fewer than 50 peak hour trips to the arterial monitoring station on Alameda Street and a separate CMP arterial analysis is not required.

The proposed Project would host special events (e.g., concerts, festivals, soccer tournaments, and farmer's markets), which would attract additional visitors to the Project Area during the p.m. peak period. As discussed in **Section 3.15.3.1**, a 2,000-person event during a typical weekday p.m. peak hour was analyzed to represent a worst-case conservative scenario that would encompass a single, large event that could occur infrequently as well as multiple, simultaneous small events that could occur weekly. Based on this assumption, it is estimated that an additional 250 vehicles would arrive during the p.m. peak period during special events.

In addition, 3,250-person events and 5,000-person events are expected to occur 1-2 times per year. These events typically occur during off-peak hours and are not expected to result in impacts to the local street network during typical busy periods (weekday a.m. and p.m. peaks). During these events, the City would require event permittees to develop site-specific traffic control plans to address and manage traffic circulation and parking during large events.

A freeway impact screening analysis was conducted based on the LADOT Traffic Study Guidelines for the freeway monitoring stations along U.S. Route 101 (U.S. 101), Interstate 10 (I-10), and State Route 60 (SR 60). The proposed Project is expected to contribute the greatest freeway trip generation on I-10, increasing the existing trips by about 10 percent. However, the trip generation from the proposed Project would be less than that of the existing industrial land use. The proposed Project is expected to add fewer than 150 peak hour trips to the monitoring stations on U.S. 101, I-10, and SR 60. Therefore, no additional Congestion Management Plan (CMP) or freeway screening analysis is required.

During a typical day, the proposed Project would not conflict with an applicable congestion management plan or other standards for designated roads or highways. Large event permittees would be required to implement site-specific traffic control plans, such that large events would not conflict with an applicable congestion management plan or other standards for designated roads or highways. Therefore, impacts would be less than significant, and mitigation would not be required.

Loss of Parking

The proposed Project would provide several on- and off-street parking areas. 31 public parking spaces plus 14 dedicated parking spaces would be provided. The 31 public parking spaces are distributed among four on-street parking locations. The West Park has one on-street parking zone located on Mateo Street south of Willow Street. The remaining three on-street parking zones are in the East Park on Mission Road, South Anderson Street, and South Clarence Street. The 14 dedicated parking spaces are in a parking lot in the East Park on South Anderson Street; however, 9 of the 14 dedicated parking spaces would be assigned to City of Los Angeles Recreation and Park (RAP) staff. The remaining 5 parking spaces would be available for the park's users.

As discussed in Section 3.15.3.1, parking demand for the proposed Project was calculated under three scenarios for weekdays and weekends. **Table 3.15-12** summarizes the number of required parking spaces during a typical weekday, and **Table 3.15-13** summarizes the number of required parking spaces

during a typical weekend for each scenario. Scenario 2 "Soccer Complex" was conservatively used to determine the parking requirements for the proposed Project. Scenario 3 was not used because special events would occur less frequently.

The Scenario 2 methodology determined that 54 vehicle parking spaces and 92 bicycle parking spaces are required for the typical weekday demand (**Table 3.15-12**) and 83 vehicle parking spaces and 140 bicycle parking spaces are required for the typical weekend demand (**Table 3.15-13**). The proposed site plan identifies 31 public vehicle parking spaces and 5 dedicated vehicle parking spaces in the East Park (angled parking along Anderson Street) for a total of 36 parking spaces for park users. Therefore, the number of total parking spaces provided would not meet the parking requirement for the proposed Project on a typical weekday, typical weekend day, or special event. The 9 parking spaces in the East Park are not included in the total number of parking spaces because they are reserved for RAP staff.

As shown in **Table 3.15-8** and on **Figure 3.15-3**, additional parking would be available at the 88 public and private lots within two miles of the Project Site. Visitors to the proposed Project Site would also be able to utilize the following existing transit lines:

- Metro Local and Limited Lines (18, 53, 60, 62, 106, 720, 760) (Bus) (all within 0.5 mile of project); and
- Metro DASH Line A (Bus) (0.4 mile from project).

Table 3.15-12: Weekday Parking Demand

Scenario	Land Use	Units	Weekday Parking Requirement	Vehicle Parking Spaces Required	Total Vehicle Parking Spaces Required[3]	Bicycle Parking Spaces Required[4]
1	City Park[1]	13 acres	5.10 spaces/acre[2]	67	47	80
2	Soccer Complex	2 Fields	38.30 spaces/field	77	54	92
3	Live Theater	5,000 Attendees	0.38 spaces/attendee	1,900	1,330	2,280

Source: Kimley-Horn and Associates, Inc., 2019b
[1]City Park Site 1
[2]Applied weekend parking demand ratio because weekday parking demand ratio is not available
[3]Replaced 30 percent of total required parking spaces with bicycle parking
[4]Calculated using replacement ratio of one parking space for every four bicycle spaces per LAMC Section 12.21.4

Table 3.15-13: Weekend Parking Demand

Scenario	Land Use	Units	Weekday Parking Requirement	Vehicle Parking Spaces Required	Total Vehicle Parking Spaces Required[3]	Bicycle Parking Spaces Required[4]
1	City Park[1]	13 acres	5.10 spaces/acre[2]	67	47	80
2	Soccer Complex	2 Fields	58.30 spaces/field	118	83	140
3	Live Theater	5,000 Attendees	0.38 spaces/attendee	1,900	1,330	2,280

Source: Kimley-Horn and Associates, Inc., 2019b
[1]City Park Site 1
[2]Applied weekday parking demand ratio because weekend parking demand ratio is not available
[3]Replaced 30 percent of total required parking spaces with bicycle parking
[4]Calculated using replacement ratio of one parking space for every four bicycle spaces per LAMC Section 12.21.4

Future improvements to increase DASH services in proximity to the Project Area have been approved, which include redesigning the Metro DASH F (Bus) route to stop at the proposed West Park and implementing a DASH Boyle Heights West (Bus) route within 0.4 mile of the proposed East Park. DASH A (Bus) was also re-routed to further increase public transit service in the Arts District. In addition, the construction of an Arts District/Sixth Street Metro Station (Rail) adjacent to the Project Area is currently undergoing an environmental review process by Metro, which is anticipated to release a draft environmental impact report in 2022 for public review. See Section 3.15.7 for more information regarding these planned and proposed transportation improvements.

To mitigate for impacts due to the loss of parking, the City would construct rideshare pick-up/drop-off zones and reserve space for facilities to encourage alternative modes of transportation, such as mobility and bike share hubs (see **MM-TRANS-1**, **MM-TRANS-2**, and **MM-TRANS-3** in Section 3.15.5). The City would also reserve space to accommodate a future Arts District/Sixth Street Metro Station in the Arts Plaza (see **MM-TRANS-4** in Section 3.15.5). Furthermore, the implementation of site-specific traffic control plans for large events would help reduce parking impacts related to large events (see **BMP-TRANS-5** in Section 3.15.4). With implementation of these mitigation measures, park users would have more options for alternate forms of transportation (i.e., rideshare, bicycles, and public transit), which would reduce the demand for parking spaces. Therefore, impacts would be less than significant.

3.15.4 Best Management Practices

BMP-TRANS-1: Temporary Detour Routes

During proposed construction activities, temporary detours shall be provided for any affected pedestrian and bicycle facilities.

BMP-TRANS-2: Construction Staging Plan

A construction staging plan shall be developed to reduce impacts related to noise, dust, traffic, and other health hazards. In addition, construction site BMPs (e.g., fencing, signs, and detours) shall be implemented to minimize hazards and prevent safety issues on the roadways and sidewalks surrounding the construction site.

BMP-TRANS-3: Construction Traffic

Construction-related trips shall be scheduled with increased frequency during off-peak hours to minimize impacts to commuters.

BMP-TRANS-4: Access to Parcels

If access to any existing parcels is removed during proposed construction activities, temporary access shall be provided, and/or new points of access shall be constructed.

BMP-TRANS-5: Site-Specific Traffic Control and Transit Plan for Large Events

Large event permittees shall develop a site-specific traffic control plan to provide information on parking and circulation and highlight transit options for event attendees to minimize congestion and vehicle miles traveled. Traffic control strategies for events will include inbound/outbound flex lanes and sheriff-controlled intersections. Traffic control plans will also identify nearby public parking facilities and identify passenger pick-up/drop-off locations. Permittees will be required to consider the cumulative traffic impacts of their event in relation to other events in the Project Area. The traffic control plans will also identify emergency services egress and access.

3.15.5 Mitigation Measures

MM-TRANS-1: Mobility Hub

The City shall reserve space for a mobility hub at the proposed Project Site, including additional amenities for bicyclists, drivers, and transit users, to encourage event attendees to use alternative modes of transportation.

MM-TRANS-2: Bicycle Facilities

The City shall reserve space for a Bike Share hub at the proposed Project Site to allow Bike Share participants to dock bicycles and scooters.

MM-TRANS-3: Rideshare Zones

The City shall create permanent rideshare pick-up and drop-off zones for the East Park and West Park. Rideshare pick-up/drop-off zones could be located on South Santa Fe Street adjacent to the proposed West Park and South Mission Road adjacent to the proposed East Park. The pick-up/drop-off zones shall be clearly marked, and wayfinding signage shall be installed throughout the proposed Project Site.

MM-TRANS-4: Public Transportation

The City shall reserve space at the proposed Project Site to accommodate access to a future Sixth Street Metro Station near the Arts Plaza.

3.15.6 Significant Unavoidable Adverse Impacts

With implementation of **MM-TRANS-1** through **MM-TRANS-4,** the proposed Project would not result in significant unavoidable adverse impacts.

3.15.7 Cumulative Impacts

According to the TAG, a project could have a significant cumulative impact on VMT if the project has both a significant project-level impact and is not consistent with the Southern California Association of Governments' Regional Transportation Plan/Sustainable Communities Strategy (SCAG RTP/SCS) in terms of development location, density and intensity. As noted above, the proposed Project is not projected to have a significant impact on VMT and no VMT analysis is required. Given its location in a dense area of the City served by public transit and the project features that encourage walking and bicycling, the Project would be consistent with the applicable goals and objectives of the SCAG 2016-2040 RTP/SCS to locate developments in infill locations served by public transit and facilitating active transportation. Therefore, the Project's cumulative impact on VMT would not be significant.

Cumulative traffic conditions are summarized in **Table 3.15-14** and **Table 3.15-15**. Under Cumulative (2023) With Project conditions, the proposed Project would not result in a significant change in the V/C ratio. Six of the eight signalized study intersections are projected to operate at LOS D or worse during the a.m. peak hour, and all of the intersections are projected to operate at LOS D or worse during the p.m. peak hour (see **Table 3.15-14**). Three of the four unsignalized study intersections are projected to operate at LOS E or worse during the a.m. and p.m. peak periods. These intersections were evaluated for the installation of a new traffic signal per LADOT analysis procedures. The analysis indicated that existing conditions warrant a traffic signal at two intersections (Hewitt Street at Fourth Street and Santa Fe Avenue at Third Street), which would be installed as part of the separate ATP-3 project.

Under Cumulative (2023) With Project Event conditions, a special event would result in temporary impacts at the intersection of Boyle Avenue and Seventh Street (see **Table 3.15-15**). However, LOS impacts would only occur during the specific time and day of the event. Impacts would be less than significant with implementation of **MM-TRANS-1** through **MM-TRANS-4**.

The proposed development projects listed in **Table 1-1** includes the construction of mixed-use developments, public transportation, and bike paths which would attract additional residents and visitors in the vicinity of the Project Area and potentially contribute to impacts on Transportation. However, these projects would be evaluated on their consistency with the City's adopted policies, plans, and programs related to transportation, including the City's Mobility Plan 2035 (City of Los Angeles, 2016). In addition, these projects would be required to implement BMPs and/or mitigation measures to reduce impacts related to Transportation.

In accordance with AB 1358, the City is planning to move towards a balanced, multimodal transportation system that would reduce potential impacts related to Transportation. Several transportation infrastructure improvement projects in vicinity of the Project Site are planned or under consideration, and include the following:

- Planned projects to improve and add bicycle- and pedestrian-friendly infrastructure (see **Table 1-1**). For the East Park, the ATP-1 project would a Class I bike path that extends from the Viaduct bike

ramp south along Mission Road and Myers Street to Seventh Street. In addition, Mission Road between Cesar Chavez and Jesse Street is listed as a Tier 2 Bicycle Lane (i.e., bicycle facilities on arterial roadways with striped separation) in the 2035 Mobility Plan. For the West Park, the ATP-3 project would result in Class II and Class IV bicycle lanes along Mateo Street between Santa Fe Avenue and Seventh Street and on Santa Fe Avenue between Mateo Street and Seventh Street. The proposed Los Angeles River Path Project would create a new pedestrian and bicycle path that connects Elysian Valley through Downtown Los Angeles to the City of Maywood. These proposed bicycle facilities adjacent to the proposed Project Site would provide park users the necessary means to access the park using bicycles. The ATP projects are anticipated to be completed by 2024 and the Los Angeles River Path Project is anticipated to be completed by 2027.

- Planned installation of ATCS, which would dynamically control the signalized intersections in real-time operations to enhance mobility.
- In 2019, the City Council and Metro agreed to enter an MOU to begin design activities and complete and EIR for a proposed Arts District/6th Street Station. The station would be located between 6th and 7th Street bridges in an existing rail facility. Metro anticipates that the EIR will be completed in 2023. Funding for construction has not been identified for this potential project.
- Planned expansion of transit access to the Arts District and Boyle Heights neighborhoods will reduce the number of vehicle trips to the Project Site, especially during large events. The City Council adopted the LADOT's Transit Service Analysis (TSA) on October 31, 2018. The TSA increases DASH services across the City, including adjacent to the Project Site. To better serve the Arts District, DASH A was re-routed to travel further south to Palmetto Street and Molino Street. In addition, a redesigned DASH F route has been approved that would travel from Union Station down Mateo Street to Seventh Street, stopping at the proposed West Park site. The redesigned DASH F route is anticipated to begin operations by January 2022. Furthermore, a new DASH Boyle Heights West route was approved, which will provide transit access to the Pico Gardens area with stops within 0.4 mile north of the proposed East Park site. The DASH Boyle Heights West route is anticipated to begin service by January 2022.
- Planned LA Sanitation parking lot at the intersection of South Mission Road and Jesse Street (see **Figure 1-2**), which could add approximately 30 to 40 public parking spaces approximately 500 feet south of the proposed East Park. The project is anticipated to be completed in 2025.

Therefore, the proposed Project would not result in cumulatively considerable impacts related to Transportation.

Table 3.15-14: Cumulative (2023) With Project Conditions for Study Intersections

Signalized Intersections		Cumulative (2023) Without Project LOS Analysis Results				Cumulative (2023) With Project LOS Analysis Results				Change in V/C		Significant Impact?	
		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour					
		V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	A.M.	P.M.	A.M.	P.M.
1	Alameda Street at Sixth Street	0.895	D	1.009	F	0.894	D	1.008	F	0.001	0.001	No	No
2	Mateo Street at Sixth Street	0.945	E	1.333	F	0.945	E	1.331	F	0.000	-0.002	No	No
3	Alameda Street at Seventh Street	1.193	F	1.341	F	1.193	F	1.339	F	0.000	-0.002	No	No
4	Mateo Street at Seventh Street	0.976	E	1.379	F	0.976	E	1.377	F	0.000	-0.002	No	No
5	Santa Fe Avenue at Seventh Street	0.811	D	0.993	E	0.811	D	0.990	E	0.000	-0.003	No	No
6	Boyle Avenue at Seventh Street	0.762	C	0.884	D	0.758	C	0.875	D	-0.004	-0.009	No	No
7	Boyle Avenue at Whittier Boulevard	0.826	D	0.862	D	0.825	D	0.860	D	-0.001	-0.002	No	No
8	Alameda Street at Fourth Street	0.571	A	0.935	E	0.571	A	0.934	E	0.000	-0.001	No	No

Unsignalized Intersections		Delay (Seconds)	LOS	Delay (Seconds)	LOS	Delay (Seconds)	LOS	Delay (Seconds)	LOS	Signal Warrant Analysis Required?
9	Hewitt Street at Fourth Street[1]	56.2	F	*	F	56.0	F	*	F	Yes
10	Clarence Street at Fourth Street	*	F	39.8	E	*	F	39.8	E	Yes
11	Santa Fe Avenue at Mateo Street	8.6	A	14.9	B	8.6	A	14.6	B	No
12	Santa Fe Avenue at Third Street	95.4	F	139.4	F	92.9	F	136.5	F	Yes

*1. HCM 2000 method was used because HCM 2010 does not support this intersection lane configuration; *Delay exceeds LOS F threshold*
Source: (Kimley-Horn and Associates, Inc., 2019a)

Table 3.15-15: Cumulative (2023) With Project Event Conditions for Study Intersections

Signalized Intersections		Cumulative (2023) Without Project LOS Analysis Results		Existing (203) With Project LOS Analysis Results		Change in V/C	Significant Impact?
		P.M. Peak Hour		P.M. Peak Hour			
		V/C Ratio	LOS	V/C Ratio	LOS	P.M.	P.M.
1	Alameda Street at Sixth Street	1.009	F	1.012	F	0.003	No
2	Mateo Street at Sixth Street	1.333	F	1.331	F	-0.002	No
3	Alameda Street at Seventh Street	1.341	F	1.339	F	-0.002	No
4	Mateo Street at Seventh Street	1.379	F	1.385	F	0.006	No
5	Santa Fe Avenue at Seventh Street	0.993	E	0.998	E	0.005	No
6	Boyle Avenue at Seventh Street	0.884	D	0.907	E	**0.023**	**Yes**
7	Boyle Avenue at Whittier Boulevard	0.862	D	0.860	D	-0.002	No
8	Alameda Street at Fourth Street	0.935	E	0.940	E	0.005	No
Unsignalized Intersections		**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Signal Warrant Analysis Required?**	
9	Hewitt Street at Fourth Street[1]	*	F	*	F	Yes	

10	Clarence Street at Fourth Street	39.8	E	39.4	E	Yes
11	Santa Fe Avenue at Mateo Street	14.9	B	16.3	**C**	No
12	Santa Fe Avenue at Third Street	139.4	F	141.4	F	Yes

1. HCM 2000 method was used because HCM 2010 does not support this intersection lane configuration
Source: (Kimley-Horn and Associates, Inc., 2019a)

3.16 Utilities and Service Systems

This section describes the affected environment and regulatory setting for Utilities and Service Systems related to the Project Area and surrounding area. In addition, this section describes the potential impacts related to Utilities and Service Systems that would result from implementation of the proposed Project. As noted in the analysis below, impacts associated with Utilities and Service Systems during construction or operation of the proposed Project would be less than significant and mitigation measures are not required.

3.16.1 Regulatory Setting

A review of the various federal, state, regional, and local government regulatory requirements was conducted to identify regulations that relate to Utilities and Service Systems. This section summarizes the various regulatory requirements that are relevant to the proposed Project.

3.16.1.1 State

California Environmental Quality Act

CEQA requires agencies to address impacts on public services, utilities, and service systems. As required by CEQA, agencies must determine whether a project would result in adverse impacts on acceptable maintenance ratios, response times or other performance objectives for any public services, specifically on fire protection, police protection, schools, parks, and other public facilities.

3.16.1.2 Local

City of Los Angeles Low Impact Development Ordinance

The Low Impact Development (LID) ordinance (Ordinance Number 181899), which became effective May 2012, requires development and redevelopment projects to mitigate runoff in a manner that utilizes natural resources to capture rainwater. The LID ordinance applies to all development and redevelopment projects that create, add, or replace 500 square feet or more of impervious surface area. The LID ordinance expands on the existing Standard Urban Mitigation Plan (SUSMP) requirements adopted in 2000, which only applied to projects falling under certain categories (City of Los Angeles, 2019b). Under the LID ordinance, projects must implement LID Best Management Practices (BMP), as recommended in the City's *Planning and Land Development Handbook for Low Impact Development* (City of Los Angeles, 2016). LID BMPs include infiltration, capture and use, and high efficiency bio-filtration/retention system BMPs (i.e., infiltration trenches and basins, dry wells, underground detention chambers, permeable pavement, cisterns and rain tanks, flow-through planters, and vegetated bioswales).

3.16.2 Environmental Setting

Descriptions of the utilities in the Project Area are based on the information in the Final EIR/EIS for the Viaduct Replacement Project (California Department of Transportation and City of Los Angeles, 2011).

3.16.2.1 Energy

Electricity is supplied to the Project Area by the Los Angeles Department of Water and Power (LADWP). LADWP operates 22 generation plants with a total capacity of approximately 7,640 megawatts. The department's energy supply comes from a variety of energy sources, including renewable sources, natural gas, nuclear, hydroelectric, and coal (Los Angeles Department of Water and Power, 2013).

LADWP owns and operates several overhead and underground transmission and distribution lines in the Project Area. The transmission line system is within the LADWP Transmission Right of Way (TLRW) along the east and west banks of the LA River. There are several 230-kilovolt (kV) underground transmission lines that run along the frontage roads north and south of Sixth Street between Mateo Street and Santa Fe Avenue. In addition, there are several power poles along these frontage roads that support 34.5-kV overhead electrical transmission lines. There are four transmission towers within the vicinity of the Viaduct, with electrical conduits and overhead lines following the same alignment as the transmission lines. There are also overhead lines running along the streets perpendicular to Sixth Street throughout the Project Area.

The Southern California Gas Company (SoCalGas) provides natural gas to the City. SoCalGas is the nation's largest distributor of natural gas, serving 21.8 million consumers over 24,000 square miles throughout Central and Southern California (Southern California Gas Company, n.d.). Within the Project Area, there is a 6-inch line running along the southern Sixth Street frontage road and a 4-inch line running along the northern Sixth Street frontage road, extending from Mateo Street to South Santa Fe Avenue. There are other gas lines under the streets perpendicular to Sixth Street throughout the Project Area (i.e., Mateo Street, Imperial Street, Santa Fe Avenue, Mesquit Street, Mission Road, Anderson Street, and Clarence Street).

3.16.2.2 Water and Wastewater

LADWP provides water services within the Project Area. The primary sources of water include Los Angeles Aqueducts, local groundwater, and water purchased from the Metropolitan Water District of Southern California (MWD). The MWD delivers the purchased water to the area via the Colorado River Aqueduct and the State Water Project's California Aqueduct (Los Angeles Department of Water and Power, 2013).

The existing active water lines in the Project Area run along the Sixth Street frontage roads, including an 8-inch line on the north frontage road and 8-inch lines on the south frontage road. There is also an 8-inch abandoned water line along the north and south frontage roads that terminates at Santa Fe Street, as well as an abandoned 36-inch water line directly underneath the Viaduct. These lines run eastbound from Mateo Street to Mesquit Street. In addition, there are several active water lines perpendicular to Sixth Street at Santa Fe Avenue (8-inch), Mission Road (8-inch), Anderson Street 8-inch), and Clarence Street (6-inch).

The City's Department of Public Works, Bureau of Sanitation (LA Sanitation), provides the sewer services in the Project Area. LA Sanitation operates over 6,700 miles of public sewers and four water reclamation plants with a service population of approximately 4 million people (City of Los Angeles, 2019a).

There are 10 active sewer lines in the Project Area, which include the following lines: The portion of the Project Area west of the LA River channel includes a line that runs along the north frontage road (8-inch); one line along the south frontage road (8-inch) from Mateo Street to Santa Fe Avenue that connect to a main sewer line at Santa Fe Avenue (36-inch); an abandoned sewer line underneath the Viaduct from Mateo Street to Santa Fe Avenue (8-inch). There are also two 36-inch sewer lines within the proposed Arts Plaza. The portion of the Project Area east of the LA River channel includes large sewer pipes at Mission Road (63-inch and 96-inch), Anderson Street (10-inch), and Clarence Street (12-inch). All of these lines flow in a southerly direction.

3.16.2.3 Storm Drains

The Project Area includes stormwater drain inlets and underground pipes, which are owned and operated by the City. Stormwater flows originating from the Project Area typically discharge into the LA River. The LA River Channel is maintained by the United States Army Corps of Engineers (USACE) and the underlying drainage network is maintained by the City (Los Angeles County Department of Public Works, n.d.).

Under the Viaduct and west of the LA River, there are two recently constructed stormwater drain lines (18- and 24-inch diameter) that drain the new Viaduct approach. These lines discharge into an existing drain (36-inch) which is tributary to the 97-inch stormwater drain sewer Number 3.

The industrial area north of the Viaduct and east of the LA River is served by lines running along Mission Road (30-inch), Clarence Street (42-inch), and between Mission Road and Anderson Street (15-inch/18-inch). These lines discharge into a 62-inch trunk line at Jesse Street, which also collects flows from the areas north of the Viaduct and west of U.S. 101. There is also a 96-inch County line that runs parallel with the 62-inch trunk line along Jesse Street.

3.16.2.4 Telephone, Cable, and Fiber Optics

There are several telephone, cable, and fiber-optic lines within the Project Area, which run along the north and south frontage roads, LA Riverbanks and perpendicular cross streets, and Mesquit Street. These lines are operated by AT&T, Bell System, and Western Union.

3.16.2.5 Solid Waste

LA Sanitation provides services for solid waste pickup in the Project Area. The primary services offered include trash, recycling, and green waste. Approximately 6,652 tons of waste, manure, and bulky items are collected per day from over 750,000 residences. LA Sanitation owns a waste transfer station, a composting facility, and a trimming facility (City of Los Angeles, 2017b).

The Los Angeles County Sanitation District oversees the operation of landfills that would accept the solid waste generated during proposed construction activities. The closest landfill to the Project Area is the Puente Hills Landfill in the City of Industry.

The City purchased Central Los Angeles Recycling & Transfer Station (CLARTS) in 2004 (City of Los Angeles, 2017a). CLARTS was designed to accommodate a capacity of 4,025 tons per day. CLARTS services the City's curbside collection operations, commercial waste haulers, independent operators, and the general public. From CLARTS, waste is transferred to a landfill or recycling facility.

3.16.2.6 Railroads

There are railroad corridors along the east and west banks of the LA River. On the west bank of the LA River, the two tracks closest to the LA River are owned by the Southern California Regional Rail Authority (SCRRA) and are used primarily by Metrolink trains. The five tracks west of the SCRRA tracks are owned by Burlington Northern and Santa Fe (BNSF) Railway, and the rest of the tracks are owned and operated by the Los Angeles County Metropolitan Transportation Authority (Metro). Amtrak also operates trains on a BNSF track and a Metro track on the west bank. On the east bank, the two tracks closest to the river are owned by SCRRA, which are used by Metrolink and the Union Pacific Railroad (UPRR). The remainder of the ten tracks are owned by UPRR and utilized by UPRR.

3.16.2.7 River Access Tunnel

A City-owned tunnel is located under the Viaduct on the west side of the River. The tunnel was constructed as part of the Viaduct and consists of an access ramp with retaining walls on both sides of the ramp and portals (entrance). The tunnel provides access to the River from the frontage road on the south side of the Viaduct at the Santa Fe Avenue intersection. In addition, the tunnel provides access to the LADWP TLRW.

3.16.3 Environmental Impact Analysis

3.16.3.1 Screening Analysis

Several impacts and corresponding thresholds of significance were eliminated from further analysis in this EIR. Topics were eliminated if the IS for the Project concluded there would be No Impact, or if impacts were identified to be Less Than Significant and will not be discussed further in the EIR. Only the topics described in Section 3.16.3.2 were determined to require further analysis in this EIR. A copy of the Initial Study, which contains the eliminated topics, is provided in **Appendix A**.

During proposed construction activities, existing utilities would be protected in place. Water, sewer, gas, and stormwater connections in existing buildings have been removed and/or capped during the demolition activities for the Viaduct Replacement Project. Therefore, impacts to these utilities are not anticipated, and will not be discussed further in this EIR. There is potential to replace aboveground LADWP power poles with underground utilities in the future between Mateo Street and Santa Fe Avenue. Avenue. However, utility relocations would be coordinated with LADWP, and would be conducted in compliance with all applicable federal and state regulations and local policies. Therefore, significant impacts to these utilities are not anticipated, and will not be discussed further in this EIR.

3.16.3.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and the *L.A. CEQA Thresholds Guide*, the proposed Project would have a significant impact on Utilities and Service Systems if it would:

XIX(a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

G.1 Surface Water Hydrology. A proposed project would normally have a significant impact on surface water hydrology if it would:

- Cause flooding during the projected 50-year developed storm event, which would have the potential to harm people or damage property or sensitive biological resources;

XIX(b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

M.1. Water. The determination of significance shall be made on a case-by-case basis, considering the following factors:

- Whether sufficient capacity exists in the water infrastructure that would serve the project, taking into account the anticipated conditions at project buildout;
- The amount by which the project would cause the projected growth in population, housing or employment for the Community Plan area to be exceeded in the year of the project completion; and
- The degree to which scheduled water infrastructure improvements or project design features would reduce or offset service impacts.

3.16.3.3 Construction Impacts

XIX(a): Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

The proposed construction activities would not require or result in the construction of new water or wastewater treatment facilities or expand existing facilities. During construction, wastewater containing diesel and oil, paint, solvents, cleaners, and other chemicals, as well as construction debris and dirt, may be generated. This water would be collected, screened, and discharged in accordance with the stormwater pollution prevention plan (SWPPP). Any remaining sludge would be disposed of in accordance with water and solid waste disposal regulations, including the Clean Water Act (CWA), the Porter-Cologne Water Quality Control Act, and the Resource Conservation and Recovery Act (RCRA). The wastewater treatment provider that serves the Project Area has adequate capacity to serve the construction needs of the proposed Project. Therefore, impacts on water and wastewater treatment facilities would be less than significant and mitigation is not required.

The proposed Project includes the construction of new stormwater drainage systems to capture and route runoff from the Project Site and Viaduct to LID or structural treatment BMPs (e.g., capture and use systems, proprietary treatment vaults with media-filled cartridges, and vegetated biofiltration basins), before being discharged to the existing stormwater drainage facilities adjacent to the site. Temporary stormwater drainage BMPs that would be implemented during construction could include, but would not be limited to, the installation of earth dikes, drainage swales and ditches, silt fences, wattles, desilting basins, and stormwater drain inlet protection. These BMPs would be implemented in compliance with the CWA, the Porter-Cologne Water Quality Control Act, the City's Stormwater Program, and the City's LID Ordinance (Ordinance Number 181899). Temporary stormwater drainage facilities would be installed within the limits of the construction site, and no environmental effects would result from the

installation of these facilities. With implementation of the temporary stormwater drainage BMPs listed above, impacts on stormwater drainage systems would be less than significant and mitigation is not required.

The proposed Project would require construction of new utility connections, relocations and undergrounding of utilities, and other utility improvements. Utility installation and relocations would be limited to within the Project Area, where there are little to no known sensitive resources. As such, no significant environmental effects are anticipated during proposed Project construction. During construction activities, the City would coordinate with service providers to ensure that there are no disruptions in utility services. Therefore, impacts on electric power, natural gas, and telecommunications facilities would be less than significant and mitigation is not required.

- **Cause flooding during the projected 50-year developed storm event, which would have the potential to harm people, damage property or sensitive biological resources.**

As discussed in the Hydrology and Water Quality section (Section 3.9), the Project Area does not include sensitive biological resources or properties located within special flood hazard areas subject to inundation. In addition, the proposed construction site would not be accessible to the public. Proposed construction activities within the LA River would be performed during the dry season. Therefore, the proposed Project is not anticipated to cause flooding during the projected 50-year developed storm event that would have the potential to harm people or damage property or sensitive biological resources. Impacts would be less than significant and no mitigation is required.

XIX(b): Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

There are sufficient water supplies available to serve the water needs required for proposed construction activities, such as water for cleaning surfaces, mixing with concrete or other materials, or suppressing dust. The relatively minor water supply needed for proposed construction activities would leave sufficient water supplies available for other reasonably foreseeable future development during normal, dry, and multiple dry years. Therefore, impacts would be less than significant and mitigation is not required.

- **Whether sufficient capacity exists in the water infrastructure that would serve the project, taking into account the anticipated conditions at project buildout?**

As discussed above, there is sufficient water infrastructure capacity to serve the proposed construction activities. Therefore, impacts would be less than significant and mitigation is not required.

- **The amount by which the project would cause the projected growth in population, housing or employment for the Community Plan area to be exceeded in the year of the project completion.**

Proposed construction activities would not result in a measurable growth in population, housing, or employment. Construction workers would commute to the job site on a daily basis. Construction workers would likely be hired from the local area and are not likely to relocate from more distant areas. In addition, employment resulting from proposed construction activities would be short-term and temporary. Because proposed construction activities are not expected to result in population, housing, or employment growth, impacts would be less than significant and mitigation is not required.

- **The degree to which scheduled water infrastructure improvements or project design features would reduce or offset service impacts.**

Proposed construction activities would not reduce or offset services. If necessary, the City would work in close coordination with utility providers to develop a relocation plan to minimize possible impacts and disruption to service utilities. Therefore, impacts would be less than significant and mitigation is not required.

3.16.3.4 Operational Impacts

XIX(a): Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

Features of the proposed Project, including recreational playing fields and performance and event spaces, could result in increased day-use populations in the Project Area and additional water consumption and wastewater generation. Amenities, such as a community building and/or concession building, public restrooms, event vendor hook-ups, and drinking water fountains are proposed to accommodate the proposed Project. Aesthetic and recreational features, such as water features and landscape irrigation, are proposed to enhance the experience of the proposed Project. The features listed above are not expected to require or result in the construction of new water or wastewater treatment facilities or expand existing facilities. Therefore, impacts on water and wastewater treatment facilities would be less than significant and mitigation is not required.

The irrigation system for the proposed Project would be designed to receive recycled water (i.e., purple pipe) in the event that future supplies become available but would initially be hooked up to a potable water supply. There is potential for the proposed Project to receive treated overflow water from the nearby Hollenbeck Park Lake for irrigation purposes. Space may be reserved on the east side of Clarence Street for a future irrigation water connection and future building with treatment equipment.

Large-scale stormwater capture and use would not be feasible for irrigation purposes because of budget constraints and the physical characteristics of the Project Site (i.e., the Project Site is bisected by the LA River and has a linear configuration). Localized below-grade capture and use systems may be implemented below some of the proposed lawn areas to supplement potable irrigation water with captured site stormwater.

The proposed Project includes the construction of stormwater drainage systems to capture and route runoff from the Project Site and Viaduct to LID and structural treatment BMPs, before being discharged to the existing stormwater drainage facilities adjacent to the site. As described in the Hydrology and Water Quality section (Section 3.9), runoff from the Project Site would be treated through the use of various capture and use/release BMPs. For the tributary runoff that discharges through the Viaduct bents to the proposed West Park and East Park, structural treatment BMPs (i.e., proprietary vaults with media-filled cartridges) would be installed to treat the runoff for pollutants of concern. Runoff from larger storm events would be bypassed through the internal bypass of each BMP to new connections to the existing storm drain system. Due to their discharge locations and depths, it would not be feasible to install additional BMPs at the Viaduct bents draining to the Arts Plaza and directly to the LA River. Rather, these

portions of the Viaduct would rely on catch basin filter inserts installed as part of the Viaduct Replacement Project to treat the runoff.

The remaining localized rainfall falling on the portion of the Project Site outside of the Viaduct's footprint would be treated through a combination of incidental infiltration during sheet flow along proposed pervious land areas, incidental infiltration within localized vegetated basins, and below-grade capture and use systems below some of the proposed lawn areas in areas with a larger impervious surface area footprint. The incidental infiltration or capture and use of the stormwater would remove pollutants of concern. The captured site stormwater could then be used to supplement potable irrigation water at the lawns, as discussed above. Larger storm events would be captured and conveyed through proposed local storm drainage systems to new connections to the existing storm drainage systems. Engineering drawings showing the existing drainage area and storm drain facilities, as well as the placement of proposed LID BMPs are included in **Figure 3.16-1a** and **Figure 3.16-1b**. Additional figures depicting the design of the LID BMPs are included in the Conceptual Low Impact Development Report prepared for the proposed Project (Tetra Tech, 2018b).

The project would increase the amount of impervious surface areas from current conditions. However, prior to beginning the construction of the Sixth Street Viaduct, the existing mainline served this area, which was nearly 100 percent impervious. As described in Section 3.16.3.3, construction of the proposed stormwater drainage systems and BMPs would comply with the City's LID Ordinance (Ordinance Number 181899), as well as all applicable permits, design standards, and regulations to reduce significant environmental effects. Therefore, impacts on stormwater drainage facilities would be less than significant and mitigation is not required.

The proposed Project would require new utility connections and other utility improvements. Electricity would be required to power various proposed Project features such as park and street lighting, buildings (e.g., café building, concessions area, restrooms, and office and storage spaces), and electric vehicle charging stations and other mobility hub elements. Food truck and temporary performance equipment (sound and lighting) hookups would be required for special events. Natural gas may be required to heat water and interior spaces, operate cooling equipment, and generate power for buildings. Other utility improvements would include the installation of WiFi and security cameras.

As discussed in Section 3.16.3.4, the proposed utilities and utility relocations would be limited to within the Project Area, where there are little to no known sensitive resources. As such, no significant environmental effects are anticipated during proposed Project operation. The City would coordinate with service providers to ensure that there are no disruptions in utility services. Therefore, impacts would be less than significant and mitigation is not required.

- **Cause flooding during the projected 50-year developed storm event, which would have the potential to harm people or damage property or sensitive biological resources.**

As discussed in the Hydrology and Water Quality section (Section 3.9), the construction of terraces and vegetated planters would result in modifications to the LA River channel that could affect the hydraulic performance of the LA River. In addition, the proposed Project would increase the impervious surface area of the Project Site, which could result in increased stormwater runoff draining to the LA River. Therefore, the proposed Project could marginally increase flood flows during the 50-year design storm event. However, the proposed terraces and vegetated planters would be constructed as high as possible

Figure 3.16-1a: Low Impact Development Exhibit (West)

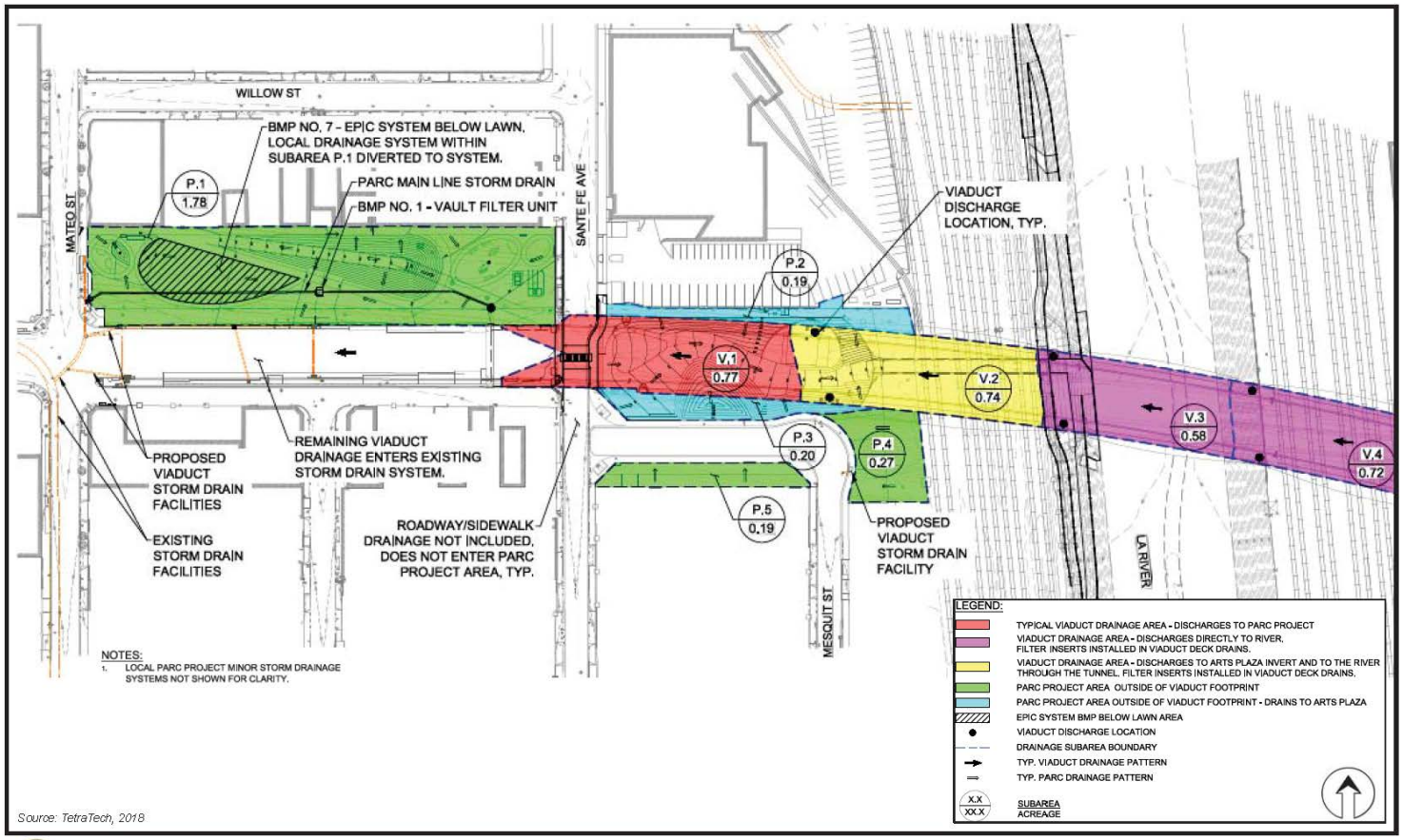

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FIGURE 3.16-1a. LOW IMPACT DEVELOPMENT EXHIBIT (WEST)
Sixth Street PARC Project

Figure 3.16-1b: Low Impact Development Exhibit (East)

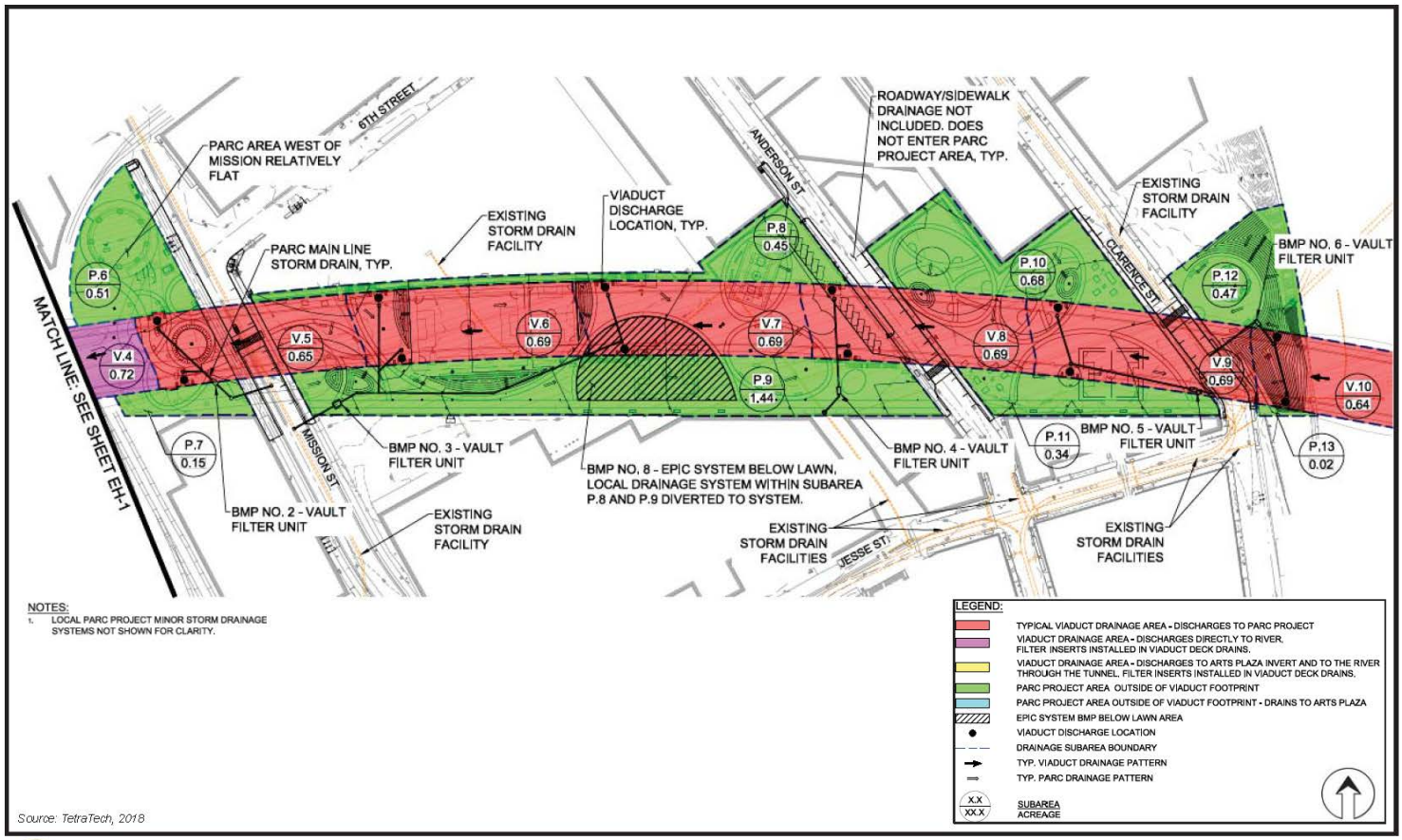

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FIGURE 3.16-1b. LOW IMPACT DEVELOPMENT EXHIBIT (EAST)
Sixth Street PARC Project

on the west and east banks of the LA River such that flood waters would only be received in the rarest of storm events. In addition, the terracing would not increase water surface elevations greater than levels prior to the Viaduct Replacement Project. Therefore, any impacts to the hydraulic performance of the LA River through the construction of terraces and concrete planters are anticipated to be significantly offset by the Viaduct Replacement Project (see Section 3.16.7 for additional discussion on cumulative impacts).

As discussed in Section 3.9, there are no properties located within special flood hazard areas subject to inundation. In addition, as discussed in Section 3.3, there are no sensitive biological resources within the Project Area. Therefore, the proposed Project is not anticipated to cause flooding during the projected 50-year developed storm event that would have the potential to damage property or sensitive biological resources.

Although the proposed Project would not provide public access to the LA River channel, the public would be able to enter the LA River Access Tunnel, which would be subject to inundation. Therefore, the proposed Project could result in flooding that would have the potential to harm people. Safety measures would be added to the LA River Access Tunnel entry point within the Arts Plaza to deter the public from entering the tunnel during a storm event (e.g., vehicular deterrents such as bollards and safety warning devices). In addition, the City would develop a public safety plan to reduce the potential for flooding to cause harm to the public (**MM-HYDRO-1**). The public safety plan would include protocols for protecting pedestrians and potential homeless populations in the LA River Access Tunnel during flood conditions. With implementation of **MM-HYDRO-1**, the proposed Project would not cause flooding during the projected 50-year developed storm event, which would have the potential to harm people or damage property or sensitive biological resources; therefore, impacts would be less than significant and no mitigation is required.

XIX(b): Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

The LADWP water supply for the 2017-2018 fiscal year was 521,915 acre-feet (City of Los Angeles, 2018). The projected water demand for the City in 2030 is 776,000 acre-feet (City of Los Angeles Department of Water and Power, 2008).

The annual estimated water usage for the proposed Project is shown in **Table 3.16-1**. The proposed Project is anticipated to use approximately 20.16 acre-feet of water per year—approximately .004 percent of existing water usage—which is substantially lower than the annual water use threshold that triggers an assessment and consultation with LADWP (200-acre feet/year). The proposed Project would not meet the definition of a "Project" under California Water Code Section 10910 because the proposed work would not have a water demand that is equivalent to, or greater than, the amount of water required by a 500 dwelling unit project. The proposed Project would implement design features to reduce the consumption of water resources, such as low-flow water fixtures and water efficient irrigation design and practices.

In addition, the proposed Project would include drought-tolerant landscaping to further reduce water consumption (**BMP-USS-4**). Proposed Project landscaping would be consistent with the City's River Improvement Overlay (RIO) Ordinance (Ordinance Number 183145), which stipulates that 75 percent of any project's newly landscaped area shall be planted with any combination of the following: native

trees, plants and shrubs, or species defined as WatershedWise, or species listed in the Los Angeles County River Master Plan Landscaping Guidelines and Plant Palettes.

Table 3.16-1: Annual Estimated Water Usage

Proposed Project Feature	Volume (gallons/year)	Annual Projected Water Demand (acre-foot*)
General Irrigation Demand	4,841,246	14.86
Splash Pad	1,284,375	3.94
Non-Residential Buildings	444,844	1.37
Total	6,570,465	20.16

Notes: The landscaping water demand was calculated based on the Model Water Efficient Landscape Ordinance.
1 acre-foot = 325,851 gallons

The proposed Project is expected to receive potable water from several sources, including treated State Water Project (SWP) water from Northern California, groundwater, and/or water imported by the City from the Owens Valley and the Colorado River Aqueduct. As described above, the irrigation system would be designed with purple pipe to accommodate potential recycled water supply lines in the future and may eventually receive treated overflow water from Hollenbeck Park Lake.

Based on the projected water usage in **Table 3.16-1**, the proposed Project would leave sufficient water supplies available for other reasonably foreseeable future development during normal, dry, and multiple dry years. Therefore, impacts would be less than significant and mitigation is not required.

- **Whether sufficient capacity exists in the water infrastructure that would serve the project, taking into account the anticipated conditions at project buildout.**

See responses above. The proposed Project is anticipated to use approximately 20.16 acre-feet of water per year and would receive potable water from several sources. In addition, the irrigation system for the proposed Project would be designed to accommodate recycled water in the event that supplies become available. Based on the projected water usage, the existing water infrastructure has sufficient capacity to serve the proposed Project at buildout. Therefore, impacts would be less than significant and mitigation is not required.

- **The amount by which the project would cause the projected growth in population, housing or employment for the Community Plan area to be exceeded in the year of the project completion.**

As discussed in the Population and Housing section (Section 3.112), the proposed Project does not include the establishment of new homes or the extension of roads or infrastructure to undeveloped areas. In addition, the proposed Project would not create a substantial number of jobs. Therefore, the proposed Project is not expected to result in population, housing, or employment growth in the Central City North and Boyle Heights Community Plan areas. Therefore, impacts would be less than significant, and mitigation is not required.

- **The degree to which scheduled water infrastructure improvements or project design features would reduce or offset service impacts.**

The proposed Project would require new potable water connections for the proposed West and East Park buildings, drinking fountains and hookups throughout the Project Site, splash pad, and irrigation systems. As described above, the proposed Project would be designed with low-flow water fixtures, drought friendly landscaping, and water efficient irrigation design and practices to reduce the consumption of water resources. In addition, the irrigation system would be designed with purple pipe to accommodate potential recycled water supply lines in the future. The proposed Project would also be designed to promote beneficial stormwater treatment and/or capture, including structural BMPs and vegetated biofiltration basins to remove pollutants of concern before being discharged into the stormwater drain system.

The Project Area includes water infrastructure that accommodated the demands of the previous commercial and industrial buildings that were demolished as part of the Viaduct Replacement Project. Therefore, the proposed Project would not increase water demands that would result in service impacts to existing water infrastructure. These water conservation and treatment practices are expected to offset long-term service impacts. Therefore, impacts would be less than significant and mitigation is not required.

3.16.4 Best Management Practices

Impacts on Utilities and Service Systems would be avoided or minimized by implementing the following BMPs:

BMP-USS-1: Wastewater Treatment

Any wastewater produced as a result of proposed construction activities, such as water containing diesel and oil, paint, solvents, cleaners, and other chemicals, as well as construction debris and dirt, shall be collected in settlement tanks and screened. The clean water shall be discharged, and the remaining sludge shall be disposed of in accordance with water and solid waste disposal regulations, including the CWA, the Porter-Cologne Water Quality Control Act, and the RCRA.

BMP-USS-2: Temporary Stormwater Drainage Measures

Temporary stormwater drainage measures to prevent polluted runoff in the construction site shall include, but not be limited to, the installation of earth dikes, drainage swales, and ditches, silt fences, desilting basins, and stormwater drain inlet protection.

BMP-USS-3: Coordination with Service Providers

The location of underground utilities shall be confirmed prior to proposed construction activities by contacting the Underground Service Alert of Southern California (DigAlert). If necessary, the City shall work in close coordination with utility providers to develop a relocation plan to minimize possible impacts and disruption to service utilities.

BPM-USS-4: Reduced Consumption of Water Resources

Design features to reduce the consumption of water resources shall be implemented, such as low-flow water fixtures and water efficient irrigation design and practices. In addition, drought-tolerant landscaping shall be planted to further reduce water consumption.

3.16.5 Mitigation Measures

MM-HYDRO-1: Public Safety Plan

Prior to Final Plan approval, the City, in coordination with USACE, shall publish a Public Safety Plan in order to reduce the potential for safety impacts related to flooding. The Public Safety Plan shall include an evacuation plan and protocols for protecting pedestrians and potential homeless populations (e.g., vehicular deterrents such as bollards and safety warning devices) in the LA River Access Tunnel during flood conditions.

3.16.6 Significant Unavoidable Adverse Impacts

There are no significant unavoidable adverse impacts on Utilities and Service Systems resulting from construction and operation of the proposed Project.

3.16.7 Cumulative Impacts

As discussed in the Hydrology and Water Quality section (Section 3.9), any impacts to the hydraulic performance of the LA River through the construction of the terracing and vegetated planters are anticipated to be significantly offset by the hydraulic improvements of removing the center pier of the existing Sixth Street Viaduct as part of the Viaduct Replacement Project (Tetra Tech, 2018a). Therefore, when considered cumulatively with the Viaduct Replacement Project, impacts related to flooding would be less than significant.

As also discussed in Section 3.9, the Project Site consisted of commercial and industrial properties prior to the construction of the Viaduct Replacement Project, with impervious surface area totaling nearly 100 percent. Over the course of the Viaduct construction, the impervious surface area decreased to approximately 3.6 acres (28 percent). As shown in Section 3.9, the cumulative impervious surface area (including the Viaduct and the proposed Project) would be approximately 8.9 acres (71 percent). Therefore, cumulatively, when combined with the Viaduct Replacement Project, there would be a net decrease in impervious surface area at the Project Site, which would result in beneficial impacts on utilities and service systems (e.g., reductions in stormwater drainage and wastewater infrastructure demands).

With implementation of the BMPs described in Section 3.16.4, the proposed Project is not expected to result in any significant impacts on Utilities and Service Systems. Other projects in the vicinity of the proposed Project (see **Table 1-1**) would be required to comply with all federal and state regulations and be consistent with local policies related to Utilities and Service Systems. Projects would be required to confirm the presence of utilities that could be affected and consult with utility owners regarding potential relocations or service disruptions. Projects would also be required to consult with overseeing agencies (such as LADWP or SoCalGas) if water, energy, or other resource consumption is anticipated to be higher than developed thresholds. In addition, projects would be evaluated based on whether waste generation

(e.g., solid waste and wastewater) would exceed the capacity of the existing utility and service systems. Other development projects would be required to develop BMPs and mitigation measures to reduce impacts on Utilities and Service Systems. Therefore, the proposed Project would not result in cumulatively considerable impacts related to Utilities and Service Systems.

3.17 Mandatory Findings of Significance

3.17.1 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and the *L.A. CEQA Thresholds Guide*, the proposed Project would have a significant impact if it would:

XXI(a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory.

XXI(b) Have impacts that are individually limited, but cumulatively considerable? ("cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects).

XXI(c) Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly.

3.17.2 Construction Impacts

XXI(a): Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory.

Sections 3.1 through 3.16 address and disclose all potential environmental effects associated with proposed construction activities, which are summarized in **Table ES-1**. Proposed construction activities would result in temporary impacts to the quality of the environment, which include the following:

- Construction staging and activities would temporarily degrade the aesthetics of the Project Site.
- The use of construction equipment would also increase emissions of criteria air pollutants that would result in temporary impacts related to air quality and greenhouse gases.
- Removal of habitat and increased noise, vibration, light, carbon dioxide emissions, and human activity could impact wildlife.
- Changes to the concrete lining and banks of the Los Angeles River, including direct removal and replacement of concrete, could result in temporary impacts on jurisdictional aquatic resources.
- Excavation and other ground-disturbing activities could result in unanticipated fossil discovery and/or unearthing of buried archaeological remains, including prehistoric Native American remains.

- Modifications to the Los Angeles River, which would not impair the integrity of the historic resource.
- Proposed construction activities, including the remediation of contaminated soils would generate hazardous wastes and materials.
- Construction activities could result in erosion and increase sediments in stormwater runoff or generate dust.
- The use of construction equipment, which include dozers, pavement breakers, core drills, industrial saws, motor graders, rollers, backhoe loaders, trench diggers, soil compactors, and pavers, would temporarily generate additional noise and vibration in the Project Area.
- The presence of construction equipment could result in temporary congestion on roadways, loss of on-street parking, and delays to emergency service providers.

All construction impacts related to the quality of the environment would be temporary and short-term. The proposed Project would comply with required laws, permits, ordinances, and plans. Implementation of mitigation measures and best management practices (BMP), as identified in **Table 3.17-1** at the end of this section, would reduce impacts during proposed construction activities to less than significant.

XXI(b): Have impacts that are individually limited, but cumulatively considerable? ("cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects).

Sections 3.1 through 3.16 address and disclose all potential cumulatively considerable impacts associated with the proposed Project. With the incorporation of mitigation measures and BMPs, as identified in **Table 3.17-1**, impacts during proposed construction activities would be less than significant.

XXI(c): Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly.

Sections 3.1 through 3.16 address and disclose all potential environmental effects associated with proposed construction activities, which are summarized in **Table ES-1**. As described above, proposed construction activities would result in temporary impacts to the quality of the environment, which could result in direct and indirect effects on human beings, including:

- Visual impacts associated with construction staging and activities.
- Health risks associated with greater pollutant emissions and exposure to hazardous wastes and materials.
- Sensitivity to increased light, noise, and vibration.
- Traffic and transportation impacts from temporary road closures and the movement of construction equipment/vehicles.

Proposed construction activities would comply with required laws, permits, ordinances, and plans. Implementation of mitigation measures and BMPs, as identified in **Table 3.17-1,** would reduce impacts during proposed construction activities to less than significant.

3.17.3 Operational Impacts

XXI(a): Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory.

Sections 3.1 through 3.16 address and disclose all potential environmental effects associated with operation of the proposed Project, which are summarized in **Table ES-1**. Operation of the proposed Project could result in potentially significant impacts to the quality of the environment, which include the following:

- During large special events, increased vehicle traffic would result in greater emissions of criteria air pollutants, resulting in impacts on air quality.
- Proposed and existing parking spaces would not meet the anticipated parking demand during operation of the proposed Project.
- During large special events, increased vehicle traffic would result in impacts related to traffic and parking.

The proposed Project would comply with required laws, permits, ordinances, and plans. Implementation of the mitigation measures and BMPs, as identified in **Table 3.17-1,** would be implemented to reduce impacts to less than significant.

Operation of the proposed Project would result in beneficial impacts to the quality of the environment, which include the following:

- The proposed Project would transform an underutilized lot into an aesthetically pleasing landscaped park that would improve the visual character and quality of the Project Site.
- The proposed Project would include trees and other natural and artificial substrates that would potentially create additional nesting and roosting habitat for birds and bats.
- The proposed Project would remediate contaminated soils to standards allowing unrestricted use of the land.
- The proposed Project would provide open space and recreational facilities that would meet the existing need for parks and recreational facilities in the surrounding communities.
- The proposed Project would generate noise at levels that are less than the noise levels produced by the existing land use.
- The proposed Project would support active modes of transportation and public transit.

- The proposed Project would include low impact development design and practices to reduce the consumption of water resources and promote beneficial stormwater treatment and/or capture.

Therefore, impacts during the operation of the proposed Project would be reduced to less than significant.

XXI(b): Have impacts that are individually limited, but cumulatively considerable? ("cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects).

Sections 3.1 through 3.16 address and disclose all potential cumulatively considerable impacts associated with the proposed Project. Implementation of the mitigation measures and BMPs, as identified in **Table 3.17-1**, would reduce cumulatively considerable impacts to less than significant.

XXI(c): Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly.

Sections 3.1 through 3.16 address and disclose all potential environmental effects associated with operation of the proposed Project, which are summarized in **Table ES-1**. As described above, operation of the proposed Project would result in potential impacts to the quality of the environment, which could result in direct and indirect effects on human beings, including:

- Health risks associated with increased criteria air pollutant emissions during large special events.
- Vehicle delays associated with increased traffic during large special events.

Operation of the proposed Project would comply with required laws, permits, ordinances, and plans. Implementation of the mitigation measures and BMPs, identified in **Table 3.17-1,** would reduce impacts to less than significant. With incorporation of mitigation measures, operation of the proposed Project would not result in environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly.

Table 3.17-1: Summary of Mitigation Measures and Best Management Practices

Environmental Resource	Mitigation Measures	Best Management Practices (BMP)
Aesthetics	No mitigation measures are required.	**BMP-AES-1: Construction Lighting** If nighttime lighting at the construction site is required, lighting shall be directed downward, on-site, and away from surrounding land uses. **BMP-AES-2: Construction Staging and Construction Staging Area** Construction staging shall be coordinated with the construction of the Viaduct Replacement Project; therefore, additional use or acquisition of public space for equipment and vehicles will not be required. The construction area shall be fenced to obscure views of construction activities, materials, and staged equipment. **BMP-AES-3: Operational Lighting** Outdoor lighting for recreational activities shall be limited to the proposed operating hours. **BMP-AES-4: Regulatory Requirements for Lighting** • Proposed Project illumination shall comply with the provisions in the City's Municipal Code, including LAMC Chapter 1, Article 2, Sec. 12.21A5(k); LAMC Chapter 1, Article 7, Sec. 17.08C; and LAMC Chapter 9, Article 3, Section 93.0117. • The new walkway lighting shall be compliant with all regulations set forth by the City's Bureau of Street Lighting Design Standards and Guidelines to ensure that the area receives lighting that meets national illumination standards for vehicular and pedestrian traffic, does not emit light pollution, and produces little glare. • Lighting for sports fields and courts shall operate in compliance with Los Angeles City Recreation and Parks (RAP) illuminance level standards for outdoor sports and recreational facilities.

Environmental Resource	Mitigation Measures	Best Management Practices (BMP)
		• Lighting for security shall be illuminated in accordance with the Illuminating Engineering Society (IES) standards, IES RP-33-14 *Lighting for Exterior Environments* and IES G-1-03 *Security Lighting for People, Property and Public Spaces*, as updated by IES G-1-16 *Guide for Security Lighting for People, Property and Critical Infrastructure*.
Air Quality	**MM-AQ-1: Newer/Tier 4 Engines in Haul Trucks and Construction Equipment** • Include in all construction contracts the requirement to use 2007 and newer diesel haul trucks (e.g., material delivery trucks and soil import/export). • Include in all construction contracts the requirement that all off-road diesel-fueled construction equipment greater than 50 horsepower shall meet Tier 4 off-road emission standards. In addition, if not already supplied with a factory-equipped diesel particulate filter, all construction equipment shall be outfitted with Best Available Control Technology (BACT) devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. To the extent locally available, construction equipment shall incorporate emissions savings technology such as hybrid drives. In the event that any equipment required under this mitigation measure is not available, provide documentation as information becomes available. A copy of each unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit at	**BMP-AQ-1: SCAQMD Rules and Regulations** The contractor shall implement measures to ensure that all construction activities are consistent with SCAQMD rules and regulations. **BMP-AQ-2: Construction Worker Incentives** The City shall offer ride-share and transit incentives for construction workers to reduce emissions associated with motor vehicle use. **BMP-AQ-3: Construction Equipment Maintenance** The contractor shall maintain construction equipment by conducting regular tune-ups according to the manufacturers' recommendations.

Environmental Resource	Mitigation Measures	Best Management Practices (BMP)
	the time of mobilization of each applicable unit of equipment shall be provided. • Maintain construction equipment by conducting regular tune-ups according to the manufacturers' recommendations. • To the extent possible, the import and export of onsite materials shall be scheduled to minimize empty return trips. **MM-AQ-2: Construction Equipment Requirements** • All on- and off-road diesel-fueled equipment shall not idle for more than 5 minutes when not in use. The idling of diesel-fueled equipment and haul trucks within 1,000 feet of nearby residential land uses shall be prohibited. Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators of the 5-minute-idling limit. • Staging and queuing areas shall be located at the furthest distance possible from nearby residential land uses; • Use alternatively fueled (e.g., compressed natural gas, liquefied natural gas, propane), gasoline-fueled, or electrified construction equipment in place of diesel-fueled equipment to the extent locally available. The following additional measures are recommended to help ensure consistency with SCAQMD rules and regulations, including (but not limited to) Rule 403 for the control of fugitive dust.	

	MM-AQ-3: Fugitive Dust Controls • All active portions of the construction site shall be watered twice daily to prevent excessive amounts of dust. • Non-toxic soil stabilizers shall be applied to all inactive construction areas (previously graded areas inactive for 20 days or more, assuming no rain) according to manufacturers' specifications. • All excavating and grading operations shall be suspended when wind gusts (as instantaneous gust) exceed 25 miles per hour. • On-site off-road equipment and on-road vehicles used on-site shall be limited to 15 miles per hour. • All on-site roads shall be paved as soon as feasible, watered twice daily, or chemically stabilized. • Visible dust beyond the property line which emanates from the project shall be prevented to the maximum extent feasible. • All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust prior to departing the job site. • Track-out devices shall be used at all construction site access points. • All delivery truck tires shall be watered down and/or scraped down prior to departing the job site. • Streets shall be swept at the end of the day if visible soil material is carried onto adjacent paved public roads and use of SCAQMD Rule 1186 and 1186.1 certified street sweepers or roadway.	

Environmental Resource	Mitigation Measures	Best Management Practices (BMP)
	• Replace ground cover in disturbed areas as quickly as possible. • All trucks that are to haul excavated or graded material on-site shall comply with State Vehicle Code Section 23114 (Spilling Loads on Highways), with special attention to Sections 23114(b)(F), (e)(4) as amended, regarding the prevention of such material spilling onto public streets and roads. • Conduct continuous, direct-reading, near real-time ambient monitoring of PM10. Install appropriate signage and notify the SCAQMD in accordance with Rule 1466, Control of Particulate Emissions from Soils with Toxic Air Contaminants, prior to conducting any earth-moving activities on any site meeting the applicability of the rule.	
Biological Resources	Impacts on Biological Resources would be less than significant; therefore, mitigation measures are not required.	Impacts on Biological Resources would be avoided or minimized by implementing the following avoidance and minimization measures, which are subject to applicable regulatory agency approval**:** **BMP-BIO-1: Pre-Construction Wildlife Surveys** Pre-construction wildlife surveys shall be completed by a qualified biologist no more than 48 hours prior to clearing, grubbing, or other construction activities to determine the presence/absence of wildlife species, including special-status species, within 100 feet of the construction area. Special attention will be focused on any existing burrowing, roosting, and nesting habitat within the Project Area. Surveys shall be repeated if construction activities are suspended for five days or more. If any wildlife species are identified, appropriate BMPs shall be developed and implemented to reduce potential

		impacts on these species, in consultation with regulatory agencies where appropriate. **BMP-BIO-2: Trash and Construction Debris Removal** All trash and construction debris shall be removed from the LA River construction areas on a daily basis. All water quality BMP materials shall be properly maintained during project construction, and removed upon completion of construction activities. After completion of proposed construction activities, all construction equipment and materials shall be removed from the Project Area, and the Project Area shall be returned to pre-project conditions. **BMP-BIO-3: Work Area Limitations** No work for the proposed Project shall be conducted on the Fourth Street Bridge or Seventh Street Bridge structures. **BMP-BIO-4: Nesting Bird Survey** If vegetation trimming or clearing is conducted during the nesting season (typically February 15 through September 15), nesting bird surveys shall be completed by a qualified biologist within 300 feet of potential bird-nesting areas and 500 feet of potential raptor-nesting areas no more than 48 hours prior to trimming/removal activities to determine if nesting birds are within the affected vegetation. Surveys shall be repeated if trimming or removal activities are suspended for five days or more. **BMP-BIO-5: Nesting Bird Buffer** If nesting birds protected under the MBTA and California Fish and Game Code Sections are found in the Project Area, appropriate buffer consisting of orange flagging/fencing or similar (typically up to 300 feet for songbirds and 500 feet for raptors shall be installed and maintained until nesting activity has ended, as determined in coordination with the project biologist and regulatory agencies, as appropriate, to ensure that nesting birds and active nests are not harmed.

		BMP-BIO-6: Hazardous Material BMPs Appropriate hazardous material BMPs shall be implemented to reduce the potential for chemical spills or contaminant releases into the LA River, including any non-stormwater discharge. **BMP-BIO-7: Equipment Maintenance** All equipment refueling and maintenance shall be conducted in the staging area. In addition, vehicles and equipment shall be checked daily for fluid and fuel leaks, and drip pans shall be placed under all equipment that is parked and not in operation. **BMP-BIO-8: Regulatory Permits** The City shall consult with the appropriate responsible resource agency (e.g., CDFW and RWQCB) to determine permanent and temporary impact areas. Prior to undertaking ground-disturbing activities within or immediately adjacent to any aquatic resource areas, the City and/or their consultant shall obtain a CWA Section 401 Water Quality Certification, and California Fish and Game Code Section 1602 Streambed Alteration Agreement. **BMP-BIO-9: Pre-Construction Bat Surveys** At least 30 days prior to construction, alterations to the LA River Access Tunnel shall be surveyed by a qualified biologist to assess the presence of bats or potential bat-roosting cavities. If bats or bat-roosting cavities are identified, then during the non-breeding and active season (typically October), bats shall be safely evicted, to the extent feasible, under the direction of a qualified biologist. Once it has been determined that all roosting bats have been safely evicted from roosting cavities, exclusionary devices shall be installed and maintained where appropriate to prevent bats from roosting in these cavities prior to construction. **BMP-BIO-10: Monitoring During LA River Access Tunnel Alteration**

Environmental Resource	Mitigation Measures	Best Management Practices (BMP)
		In the event that all bats are not able to be excluded from affected roosting habitat, a qualified biologist shall monitor LA River Access Tunnel alterations. If bats are disturbed, work shall be safely suspended until all bats leave the vicinity on their own, or alternative measures can be identified under the direction of a qualified biologist. Work shall resume only once the bats have left the site and/or approval to resume work is given by a qualified biologist. **BMP-BIO-11: Bat Monitoring** In the event that all bats are not able to be excluded from affected roosting habitat, a qualified biologist shall monitor structure alteration activities. If bats are disturbed, work shall be safely suspended until all bats leave the vicinity of the LA River Access Tunnel on their own, or alternative measures shall be identified under the direction of a qualified biologist. Work shall resume only once the bats have left the site and/or approval to resume work is given by a qualified biologist. Surveys and exclusion measures are expected to prevent maternal colonies from becoming established in structures to be removed or altered. In the event that a maternal colony of bats is found, no work shall be conducted within 100 feet of the maternal roosting site until the maternal season is over or the bats have left the site, or as otherwise directed by a qualified biologist. The site shall be designated as a sensitive area and protected as such until the bats have left the site. No activities shall be authorized adjacent to the roosting site. Combustion equipment, such as generators, pumps, and vehicles, shall not be parked or operated under or adjacent to the roosting site. Construction personnel shall not be authorized to enter areas beneath the colony, especially during the evening exodus.
Cultural Resources	No mitigation measures are required.	**BMP-CUL-1: Archaeological Monitoring During Excavation**

Environmental Resource	Mitigation Measures	Best Management Practices (BMP)
		A qualified archaeological monitor shall conduct archaeological monitoring in the West Park and East Park for excavations at depths greater than 5 feet. Monitoring efforts may be reduced or eliminated for those portions of the Project Area shown to have been recently disturbed by construction activities associated with the Sixth Street Viaduct Project. **BMP-CUL-2: Tribal Cultural Resources Sensitivity Training** The City shall invite a qualified tribal representative from the Gabrieleño Band of Mission Indians to a pre-construction meeting to provide a training session to the construction contractor regarding potential tribal resources that could be encountered during construction activities and procedures to follow should a tribal resource be encountered. **BMP-CUL-3: Tribal Cultural Resources Monitoring During Excavation** The City shall retain and compensate for the services of a Tribal monitor who is both approved by the Gabrieleño Band of Mission Indians-Kizh Nation Tribal Government and is listed under the NAHC's Tribal Contact list for the Project Area. The Tribal monitor shall only be present on-site during the construction phases that involve ground-disturbing activities in the proposed Arts Plaza. Monitoring efforts may further be reduced or eliminated for those portions of the in the proposed Arts Plaza that (1) are underlain with artificial fill of known origin, (2) require superficial scraping of land at depths less than five feet, or (3) are demonstrated to have been recently disturbed by construction activities associated with the Sixth Street Viaduct Project. The on-site monitoring shall cease when the grading and excavation activities in the proposed Arts Plaza are completed, or when the Tribal representatives and monitor have

Environmental Resource	Mitigation Measures	Best Management Practices (BMP)
		indicated that the site has a low potential for impacting tribal cultural resources. **BMP-CUL-4: Unanticipated Discovery of Archaeological and Tribal Cultural Resources** In the event that potentially significant buried archaeological materials are encountered within the Project Area, all work in the vicinity must stop until the archaeological and Tribal monitor can visit the site and assess the significance of the resource. If the resources are Native American in origin, the Gabrieleño Band of Mission Indians-Kizh Nation shall coordinate with the City regarding treatment and curation of these resources. Work may continue on other parts of the Project Area while evaluation and, if necessary, mitigation takes place (CEQA Guidelines Section 15064.5 [f]). **BMP-CUL-5: Unanticipated Discovery of Human Remains** Health and Safety Code Section 7050.5, Section 15064.5(e) of the CEQA Guidelines, and PRC Section 5097.98 mandate the process to be followed in the unlikely event of an unanticipated discovery of human remains in a location other than a dedicated cemetery. The Los Angeles County Coroner must be notified within 24 hours of the discovery of potentially human remains. The Coroner must then determine within two working days of being notified if the remains are subject to his or her authority. If the Coroner recognizes the human remains (including bone fragments and funerary objects) to be Native American, he or she must contact the NAHC by phone within 24 hours. The NAHC then designates a Most Likely Descendant (MLD) with respect to the human remains within 48 hours of notification. The MLD will then have the opportunity to recommend to the Project proponent means for treating or disposing of, with appropriate dignity, the human remains and associated grave goods within 24 hours of notification.

Environmental Resource	Mitigation Measures	Best Management Practices (BMP)
Energy	Implementation of the mitigation measures identified in Section 3.2.4 (Air Quality), would reduce impacts related to construction-related energy use. No mitigation measures specifically for Energy are required.	Implementation of the BMPs identified in Section 3.2.4 (Air Quality) and Section 3.7.4 (Greenhouse Gas Emissions), construction-related energy use would be minimized to the greatest extent feasible. No BMPs specifically for Energy are required.
Geology and Soils	No mitigation measures are required.	**BMP-GEO-1: Erosion Control** The contractor shall implement standard BMPs, such as the use of fiber rolls and silt fencing, to reduce the amount of dust and dirt from leaving the construction area. **BMP-GEO-2: Geotechnical Site Investigation Recommendations** The Geotechnical Site Investigation report for the proposed Project includes recommendations to ensure that the Project Area is suitable for construction, and to ensure that appropriate measures are taken to reduce impacts during earthwork, excavation, utility trenching, backfilling, and other construction activities (Hushmand Associates, Inc., 2018). Backfill soils shall be moisture-conditioned and recompacted to meet ASTM International standards to counteract the potential adverse effects of soil expansiveness. If import soils are used, the import soil shall not exhibit an Expansion Index greater than 20 or contain more than 35 percent fines (i.e., fine-grained soils), and shall be screened by the geotechnical engineer to meet ASTM International standards. **BMP-PAL-1: Paleontological Sensitivity Training** Prior to the start of construction, all field personnel shall be briefed regarding the types of fossils that could be found and the procedures to follow should paleontological resources be encountered. Specifically, the training shall provide a description of the fossil resources that may be encountered, outline steps to follow when a

Environmental Resource	Mitigation Measures	Best Management Practices (BMP)
		fossil discovery is made, and provide contact information for a qualified paleontologist. The training shall be developed by a qualified paleontologist and provided as hand-outs or a PowerPoint Presentation that may be presented concurrently with other pre-construction training. **BMP-PAL-2: Unanticipated Paleontological Resource Discoveries** In the event that an unanticipated fossil discovery is made during construction, a qualified professional paleontologist shall be retained to examine the find and to determine whether further paleontological resource mitigation is warranted in accordance with SVP (2010) guidelines.
Greenhouse Gas Emissions	No mitigation measures are required.	**BMP-GHG-1: Off-Road Equipment Construction Requirements** Idling shall be limited for vehicles and off-road equipment. Off-road equipment shall meet Tier 4 emission standards and newer. Efficient on-road haul trucks shall be used, where practicable.
Hazards and Hazardous Materials	**MM-HAZ-1: Remediation Category 1A** The City shall be required to implement the following measures in areas where Resource Conservation and Recovery Act (RCRA) Level Heavy Metals, polychlorinated biphenyls (PCB), or total petroleum hydrocarbon diesel range organics (TPH DRO) will be excavated and disposed of at Class 1 Hazardous Waste Landfills: • Soils will be excavated as needed up to a maximum depth of 4.5 feet below ground surface (bgs), consistent with the limits designated on **Figures 3.8-3a** and **3.8-3b**, Areas of Concern with Contamination. • The transport and disposal of RCRA hazardous waste will be accompanied with a Hazardous Waste Manifest (i.e., documentation accompanying the transport, treatment,	**BMP-HAZ-1: Coordination with Regulatory Agencies** The City shall coordinate with Metro, U.S. EPA, and DTSC during construction activities to minimize health risks to the public or the environment associated with ongoing cleanup actions within the Project Area. **BMP-HAZ-2: Compliance with SCAQMD Rules and Regulations** The contractor shall implement measures to ensure that all construction activities are consistent with SCAQMD rules and regulations, including Rule 1166 - Volatile Organic Compound Emissions from Decontamination of Soil and Rule 1466 - Control of Particulate Emissions from Soils with Toxic Air Contaminants.

Environmental Resource	Mitigation Measures	Best Management Practices (BMP)
	storage and disposal of hazardous waste) completed by a licensed transporter. A site-specific CalEPA Hazardous Waste Generator Identification Number will be obtained for each RCRA hazardous waste. Additional sampling and testing will likely be required by the facility accepting the soil for disposal. • For excavations deeper than 4 feet, shoring or other approved means will be required to maintain stability of the excavation walls. • During excavation activities, dust and runoff controls will be implemented to prevent windborne or surface waterborne migration of the soil from the Project Site. The soils will be directly loaded into the transport trucks, which will require tarps to prevent spillage or windblown loss of soil during transport. These controls will be verified and monitored by an independent third party. • A site-specific Health and Safety Plan (HASP) will be prepared and implemented during all proposed construction activities, including full time perimeter sampling and testing of particulates and dust from the Project Site. • All onsite workers and supervisors will complete a 40-hour Occupational Safety and Health Administration (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER) training course and be equipped with the appropriate personal protective equipment. • Excavated areas will be backfilled with certified clean soil. **MM-HAZ-2: Remediation Category 2A**	

Environmental Resource	Mitigation Measures	Best Management Practices (BMP)
	The City shall be required to implement the following measures in areas where soils contaminated with Heavy Metals and/or TPH DRO that are classified as non-RCRA hazardous waste will be excavated. These contaminated soils shall be disposed at Class 2 Landfills: • Soils will be excavated as needed up to a maximum depth of 6 feet bgs, consistent with the limits designated on **Figures 3.8-3a** and **3.8-3b**, Areas of Concern with Contamination. • The transport and disposal of non-RCRA hazardous waste will be accompanied with a Hazardous Waste Manifest completed by a licensed transporter. A CalEPA Non-RCRA Hazardous Waste Generator Identification Number will be obtained. Additional sampling and testing will likely be required by the facility accepting the soil for disposal. • For excavations deeper than four feet, shoring or other approved means shall be required to maintain stability of the excavation walls. • During excavation activities, dust and runoff controls will be implemented to prevent windborne or surface waterborne migration of the soil from the Project Site. The soils will be directly loaded into the transport trucks, which will require tarps to prevent spillage or windblown loss of soil during transport. These controls will be verified and monitored by an independent third party. • A site-specific HASP will be prepared and implemented during all proposed construction activities, including full time perimeter sampling and testing of particulates and dust from the Project Site.	

Environmental Resource	Mitigation Measures	Best Management Practices (BMP)
	• All onsite workers and supervisors will complete a 40-hour OSHA HAZWOPER training course and be equipped with the appropriate personal protective equipment. • Excavated areas will be backfilled with certified clean soil. **Remediation Category 2B** In addition to the measures above, the following measures shall be implemented in areas where VOCs were observed in soil gases: • Emission controls will be used to clear the area of emitting VOCs (i.e., spraying water or applying foam agents to all exposed soil surfaces and/or using large, spark-free fans). Full-time monitoring will be required to verify that the emission controls are effective in preventing the VOCs from impacting workers or the public. Monitoring will comply with SCAQMD Rule 1166. • A detailed HASP will be prepared and implemented during the excavation and transport of contaminated soils. • The excavation, transport, and disposal of contaminated soils will require permitting and approval by the CUPA, CalEPA/DTSC, and SCAQMD. A detailed Work Plan/Remedial Action Plan will be prepared and submitted to these agencies for review and approval. Under Rule 1166, a Mitigation Management Plan for potential VOC emissions during excavation will be submitted to SCAQMD and subject to SCAQMD approval. A site-specific CalEPA Hazardous Waste Generator	

Environmental Resource	Mitigation Measures	Best Management Practices (BMP)
	Identification Number will be obtained and manifests completed by the licensed transporter. • A soil vapor extraction (SVE) system will be designed and installed to remove and treat VOCs in the soil gases. If Health Risk Assessments indicate the need, a vertical barrier/line will be installed around the perimeter of the area to prevent soil gases with VOCs from migrating back into the area. Gases migrating from below the clean backfill or deeper depths will be extracted through the SVE slotted wells and treated by the SVE treatment system. Treatment for VOCs typically involves carbon filtration unless hydrogen sulfide is detected in the gas stream. Operating and maintenance procedures for the SVE system and permit applications will be prepared and approved by the oversight agency and SCAQMD. • If the City determines it is necessary, a "Pilot Study" will be designed and implemented to evaluate the sustainable flow rate and concentration of VOCs in the soil gas stream and to determine the size of the final SVE system components. • Design of the SVE system, preparation of a Design Report and Work Plan/Remedial Action Plan (including HASP) will be submitted to and subject to approval by the CUPA and LACoFD Site Mitigation Unit. • The SVE will be implemented and monitored. This may require several months to over a year. • The City shall provide documentation to the CUPA, LACoFD Site Mitigation Unit, and SCAQMD when the SVE has reached the specified clean-up goals.	

Environmental Resource	Mitigation Measures	Best Management Practices (BMP)
	• Excavated areas will be backfilled with certified clean soil. **MM-HAZ-4: Remediation Category 3** The City shall be required to implement one of the following three options in areas where no heavy metals were observed, but VOCs were observed in soil gas: • Option 1: This alternative will involve the same measures as described under Category 2b above. Contaminated soils will be removed to a depth of up to 15 feet or more and shoring of the excavation walls will be necessary. A liner will be installed on the bottom of the excavation area to prevent contaminated soil gas from re-entering the backfill soils. Gas migration from the side walls will be mitigated by either installation of a vertical liner placed on the side walls of the excavation or SVE wells installed vertically outside the limits of the excavation after backfilling is done. The backfill soil will be certified clean fill and placement will need to meet the geotechnical specifications of the proposed Project design. During the process, the site will require strict emissions controls and monitoring. • Option 2: This alternative, the SVE treatment method, utilizes extraction and monitoring wells (In Situ Method) or excavation and encapsulation of impacted soils in above ground piles with horizontal slotted piping (On Site Method), a vacuum pump or pumps, and carbon filtration units to extract and remove VOCs from the soil gas. The process requires several steps as follows: 1. Design and implementation of a "Pilot Study" to evaluate the sustainable flow rate and concentration	

Environmental Resource	Mitigation Measures	Best Management Practices (BMP)
	of VOCs in the soil gas stream and to size the final SVE system components. 2. Design of the SVE system, preparation of a Design Report and Work Plan/Remedial Action Plan (including HASP) for submittal to and approval by the CUPA and CalEPA/DTSC. 3. Solicitation of bids for construction and implementation of the remediation. 4. Implementation and monitoring of the SVE. This may require several months to over a year. 5. Reporting to the agencies with documentation that the SVE has reached the specified clean up goals. • Option 3: This alternative will mitigate the impact of the VOCs and/or methane and hydrogen sulfide by precluding soil gases migration from the subsurface soil and intrusion into structures or other facilities and surface emissions. Depending on the type of soil gases and pressure in the soil gas, the systems can include several of the following components: o Shallow excavation (three to four feet below ground surface [bgs]) to allow installation of the mitigation components (some of the soil will be used to backfill trenches) o Gravel layers and slotted piping for gas collection o Liner installation above the slotted piping and extending side wide o Vacuum pumps for gas extraction or air injection blowers	

Environmental Resource	Mitigation Measures	Best Management Practices (BMP)
	○ Filtration systems to remove VOCs and/or hydrogen sulfide from the gas stream ○ Geomembrane barriers placed beneath concrete slabs and/or foundations or fill areas ○ Installation of automated and/or manual monitoring systems **MM-HAZ-4: Remediation Category 4** The City shall be required to implement the following measure in areas within Caltrans ROW where soil contains ADL: • In accordance with the Caltrans/DTSC ADL Agreement, soils above a depth of approximately 2.9 feet bgs will require one foot of clean soil cover to remain on site per the Caltrans/DTSC ADL Agreement. **MM-HAZ-5: Soil Gas Sampling** Additional soil gas sampling and testing is recommended for completion in PARC Areas 1A, 5, 6, 7, and 8. The additional sampling could potentially eliminate or reduce the need for soil gas remediation. Ambient air and soil gas samples shall be tested for VOCs. If soil gas samples in PARC Area 6 yield ILCR values below the *de minimis* risk target or within the risk management range, no further mitigation and/or remedial actions will be required. If ILCR values are above the *de minimis* risk target, additional remedial actions will be taken to lower values to within the risk management range, such as applying SVE to a maximum depth of 15 to 20 feet bgs. **MM-HAZ-6. Methane Mitigation and Testing**	

Environmental Resource	Mitigation Measures	Best Management Practices (BMP)
	Methane mitigation applies to PARC Area 1A, which is located within the Methane Zone, and portions of PARC Area 7, where soil gases were detected and impervious surfaces are to be constructed adjacent to existing buildings. Any buildings (except naturally vented) to be constructed in Area 1A shall have methane mitigation systems meeting Level II requirements involving membrane and passive venter per Table 71, unless additional testing indicates no subsurface gas pressure and lower methane concentrations. In addition, paved areas that are over 5,000 square feet in area and within 15 feet of the exterior wall of a commercial, industrial, institutional building, shall be vented in accordance with the Methane Mitigation Standards, design Level II, unless additional testing indicates no subsurface gas pressure and lower methane concentrations. Additional testing for methane concentrations and subsurface pressure shall be completed in accordance with the Division 71 Methane Seepage Regulations testing requirements should any buildings or paved areas over 5,000 square feet be proposed in PARC Area 1A and in PARC Area 7 where methane was detected.	
Hydrology and Water Quality	**MM-HYDRO-1: Public Safety Plan** The City will develop a public safety plan to reduce impacts related to flooding. The public safety plan shall include an evacuation plan and protocols for protecting pedestrians and potential homeless populations (e.g., vehicular deterrents such as bollards and safety warning devices) in the LA River Access Tunnel during flood conditions.	The following structure source control BMPs, based on the City's LID handbook, would be implemented during construction and/or operation of the proposed Project, as applicable: **BMP-HYDRO-1: Construction Drainage Design** The proposed Project will incorporate drainage designs that direct stormwater runoff or irrigation runoff away from structures or the top of the slopes. No stormwater will be allowed to discharge over the top of a cut or fill slope.

Environmental Resource	Mitigation Measures	Best Management Practices (BMP)
		BMP-HYDRO-2: Off-Site Sediment Transport All entrances and exits to the construction site will be stabilized to reduce transport of sediment off-site. Any sediment or other materials tracked off-site will be removed within a reasonable time. **BMP-HYDRO-3: Storm Drain Message and Signage** Existing and proposed storm drain catch basins within the vicinity of the Project Site shall be marked and maintained. **BMP-HYDRO-4: Outdoor Material Storage Area Design** Proposed outdoor storage areas shall be organized and maintained to prevent stored materials from being permitted to runoff with stormwater. The outdoor storage of toxic and hazardous materials is not permitted. **BMP-HYDRO-5: Outdoor Trash Storage Area Design** Proposed outdoor trash storage enclosures shall be organized and maintained to prevent the transportation of trash and debris in stormwater. Bins and dumpsters shall remain covered. **BMP-HYDRO-6: Employee Training** Operations and maintenance employees shall be trained and made aware of the source controls, LID BMPs, educational materials, and maintenance requirements for the proposed Project at first hire and yearly thereafter. **BMP-HYDRO-7: Common Area Landscape Management** A landscape maintenance program shall be established in order to optimize water efficiency, limit pollutant introduction from fertilizers and pesticides, manage landscape waste, and prevent soil erosion. **BMP-HYDRO-8: Common Area Litter Control**

Environmental Resource	Mitigation Measures	Best Management Practices (BMP)
		A waste management program shall be implemented to inspect the Project Site for litter and pick up any litter as necessary on a regular basis. **BMP-HYDRO-9: Common Area Catch Basin Inspection** Catch basins shall be inspected and maintained, at a minimum, yearly and prior to the rainy season. **BMP-HYDRO-10: Street Sweeping Parking Lots** The angled parking spaces along Anderson Street shall be vacuum swept, at a minimum, yearly and prior to the rainy season. **BMP-HYDRO-11: BMP Maintenance** Proposed structural source controls, non-structural source controls, and LID BMPs shall be maintained as outlined in the Operations and Maintenance Plan that will be developed for the proposed Project. **BMP-HYDRO-12: Structural and LID BMPs** • Runoff from the Project Site and tributary Viaduct areas will be captured by proposed stormwater drainage systems, routed to a variety of structural and LID BMPs and discharged to the existing stormwater drainage facilities adjacent to the site. In addition, the Project Site will include a combination of paved surfaces and landscaped areas to provide soil stability and further minimize erosion. • The remaining localized rainfall falling on the portion of the Project Site outside of the Viaduct's footprint will be treated through a combination of incidental infiltration during sheet flow along pervious land areas, incidental infiltration within

		localized vegetated basins, and below-grade capture and use systems below some of the proposed lawn areas in areas with a larger impervious area footprint. The incidental infiltration or capture and use of the stormwater will remove pollutants of concern. Larger storm events will be captured and conveyed through proposed local storm drainage systems to new connections to the existing storm drainage system. • Structural BMPs (i.e., proprietary vaults with media-filled cartridges) will be installed to treat runoff for pollutants of concern identified in the City's LID Manual, including sediments, oil and grease, metals, organic materials, and nutrients. Runoff will also be treated through lined vegetated biofiltration basins and below-grade capture and use systems, where the runoff will be filtered through the vegetation and soil media to remove pollutants of concern before discharging through a perforated underdrain. **BMP-HYDRO-13: Regulatory Requirements for Water Quality** • To comply with the provisions of the NPDES MS4 Permit, the proposed Project will implement a SWPPP that includes construction site BMPs to control erosion and sedimentation. BMPs include silt fencing, fiber rolls, sandbag barriers, drainage inlet protections, and berms at the top of all grade slopes. The SWPPP will also include post-construction stormwater management measures to control pollutants in stormwater discharges during operation of the proposed Project. • If groundwater is encountered, the contractor will develop a dewatering plan, and a Dewatering Permit with the Los Angeles RWQCB will also be required. Should dewatering be required, the proposed Project will comply with the General Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties.

		• Proposed construction activities will comply with all applicable federal, state, and local requirements to reduce the potential for the release of hazardous waste and other contaminants into groundwater. In addition, construction activities will be subject to the provisions of the CWA and Porter-Cologne Act; and other federal, state, and local requirements to ensure that stormwater pollutants resulting from construction will not substantially degrade water quality. • A water diversion plan is not anticipated for the proposed Project because Phase II construction activities will be performed during the dry season (April 15 through October 15). However, if work in a flowing stream is unavoidable, a water diversion plan shall be required, and the entire stream flow shall be diverted around the work area by a barrier, temporary culvert, new channel, or other means approved by the CDFW. Should water diversion be necessary, a 401/404 permit will also be required. • An emergency evacuation plan shall be prepared for Phase II construction within the LA River. If measurable rain with 25 percent or greater probability is predicted within 72 hours during project-related activities, all activities within the LA River shall cease and protective measures to prevent siltation/erosion shall be implemented/maintained. With the implementation of BMPs, alterations to drainage patterns during construction in the LA River channel will not result in substantial erosion or siltation onsite or offsite. • A Notice of Intent (NOI) for stormwater discharges associated with construction activities may also be required under the NPDES General Permit. • Stormwater BMPs should follow the latest California Stormwater Quality Association's Stormwater Best Management Practices Handbook. All entrances and exits to a

Environmental Resource	Mitigation Measures	Best Management Practices (BMP)
		construction site will be stabilized to reduce transport of sediment off-site. Any sediment or other materials tracked off-site will be removed within a reasonable time. • Any non-stormwater discharge will be controlled and properly disposed of through the sanitary sewer system or transported to an approved processing facility to prevent the contamination of site soils and groundwater. • The handling, storage, and disposal of contaminants will comply with all applicable federal, state, and local requirements. The Project Site will be remediated to standards acceptable to LACoFD and other regulatory agencies as required, thereby reducing the area affected by contaminants.
Land Use and Planning	No mitigation measures are required.	**BMP-LAND-1: Coordination with Los Angeles Department of City Planning** The City BOE shall continue to work with the Los Angeles Department of City Planning to ensure that the proposed Project is consistent with future zoning changes. **BMP-LAND-2: Coordination with Viaduct Replacement Project** Any necessary land use entitlements shall be secured prior to the start of construction activities, and shall be coordinated with construction of the Viaduct Replacement Project. **BMP-LAND-3: Construction Area** Construction equipment, materials storage, and construction activities shall be contained within the limits of construction, and construction areas shall be fenced.

Environmental Resource	Mitigation Measures	Best Management Practices (BMP)
Noise and Vibration	**MM-NOISE-1: Construction-Noise Management Plan** A construction-noise management plan (CNMP) shall be prepared for the proposed Project. The CNMP shall, at a minimum, include the following measures: • Construction activities shall be restricted outside the hours of 7:00 a.m. to 9:00 p.m. Monday through Friday, and between the hours of 8:00 a.m. to 6:00 p.m. on Saturdays. While the intention is not to conduct work on Sundays, occasional Sunday work may be required to ensure the proposed Project schedule is met. If it is determined that Sunday work is necessary, the proper permits will need to be obtained through the Police Commission. Construction activities shall be prohibited on federal holidays. • Construction equipment shall be properly maintained and equipped with mufflers. • Equipment shall be turned off when not in use for an excess of five minutes, except for equipment that requires idling to maintain performance. • A public liaison shall be appointed for project construction and shall be responsible for addressing public concerns about construction activities, including excessive noise. As needed, the liaison shall determine the cause of the concern (e.g., starting too early, bad muffler) and implement measures to address the concern. The liaison will work directly with the	**BMP-NOISE-1: Construction Equipment Requirements** Construction equipment shall be properly maintained and equipped with mufflers.

Environmental Resource	Mitigation Measures	Best Management Practices (BMP)
	construction contractor to ensure implementation of the noise control plan. • The liaison will work directly with the construction contractor to ensure implementation of the noise control plan. • The public shall be notified in advance of the location and dates of construction hours and activities. • Where necessary, temporary sound barriers shall be installed. • Signage and notification on where to report construction-generated noise shall be posted on-site and around the construction area, as well as on the Bureau of Engineering website. • Staging and queuing areas shall be located at the furthest distance possible from nearby residential land uses, as well as any other noise-sensitive land uses identified in the Project Area at the time of construction (e.g., transient lodging, schools, libraries, churches, hospitals, and nursing homes). • Limit noise/vibration intensive activities occurring within ten feet of existing structures and occupied land uses. Where possible and to the extent locally available, select low-noise/vibration generating equipment when activities occur within ten feet of adjacent existing structures.	
Population and Housing	No mitigation measures are required.	No BMPs are required.

Environmental Resource	Mitigation Measures	Best Management Practices (BMP)
Public Services	There are no mitigation measures for Public Services. The mitigation measures identified in the Transportation section below address impacts associated with traffic concerns during operation of the proposed Project.	Implementation of the BMPs identified in Section 3.15.4 (Transportation), impacts associated with delays to emergency vehicles would be avoided and minimized. No BMPs specifically for Public Services are required.
Recreation	No mitigation measures are required.	No BMPs are required.
Transportation and Traffic	**MM-TRANS-1: Mobility Hub** The City shall reserve space for a mobility hub at the proposed Project Site, including additional amenities for bicyclists, drivers, and transit users, to encourage event attendees to use alternative modes of transportation. **MM-TRANS-2: Bicycle Facilities** The City shall reserve space for a Bike Share hub at the proposed Project Site to allow Bike Share participants to dock bicycles and scooters. **MM-TRANS-3: Rideshare Zones** The City shall create permanent rideshare pick-up and drop-off zones for the East Park and West Park. Rideshare pick-up/drop-off zones could be located on South Santa Fe Street adjacent to the proposed West Park and South Mission Road adjacent to the proposed East Park. The pick-up/drop-off zones shall be clearly marked, and wayfinding signage shall be installed throughout the proposed Project Site. **MM-TRANS-4: Public Transportation** The City shall reserve space at the proposed Project Site to accommodate a future Sixth Street Metro Station in the Arts Plaza.	**BMP-TRANS-1: Temporary Detour Routes** During proposed construction activities, temporary detours will be provided for any affected pedestrian and bicycle facilities. **BMP-TRANS-2: Construction Staging Plan** A construction staging plan shall be developed to reduce impacts related to noise, dust, traffic, and other health hazards. In addition, construction site BMPs (e.g., fencing, signs, and detours) shall be implemented to minimize hazards and prevent safety issues on the roadways and sidewalks surrounding the construction site. **BMP-TRANS-3: Construction Traffic** Construction-related trips shall be scheduled with increased frequency during off-peak hours to minimize impacts to commuters. **BMP-TRANS-4: Access to Parcels** If access to any existing parcels are removed during proposed construction activities, temporary access shall be provided, and/or new points of access shall be constructed. **BMP-TRANS-5: Site-Specific Traffic Control and Transit Plan for Large Events** Large event permittees shall develop a site-specific traffic control plan to provide information on parking and circulation and highlight transit options for event attendees to minimize congestion and vehicle miles traveled. Traffic control strategies for events will

Environmental Resource	Mitigation Measures	Best Management Practices (BMP)
		include inbound/outbound flex lanes and sheriff controlled intersections. Traffic control plans will also identify nearby public parking facilities and identify passenger pick-up/drop-off locations. Permittees will be required to consider the cumulative traffic impacts of their event in relation to other events in the Project Area. The traffic control plans will also identify emergency services egress and access.
Utilities and Service Systems	**MM-HYDRO-1: Public Safety Plan** Prior to Final Plan approval, the City, in coordination with USACE, shall publish a Public Safety Plan in order to reduce the potential for safety impacts related to flooding. The Public Safety Plan shall include an evacuation plan and protocols for protecting pedestrians and potential homeless populations (e.g., vehicular deterrents such as bollards and safety warning devices) in the LA River Access Tunnel during flood conditions.	**BMP-USS-1. Wastewater Treatment** Any wastewater produced as a result of proposed construction activities, such as water containing diesel and oil, paint, solvents, cleaners, and other chemicals, as well as construction debris and dirt, shall be collected in settlement tanks and screened. The clean water shall be discharged, and the remaining sludge shall be disposed of in accordance with water and solid waste disposal regulations, including the CWA, the Porter-Cologne Water Quality Control Act, and the RCRA. **BMP-USS-2. Temporary Stormwater Drainage Measures** Temporary stormwater drainage measures to prevent polluted runoff in the construction site shall include, but not be limited to, the installation of earth dikes, drainage swales, and ditches, silt fences, desilting basins, and stormwater drain inlet protection. **BMP-USS-3. Coordination with Service Providers** The location of underground utilities shall be confirmed prior to proposed construction activities by contacting the Underground Service Alert of Southern California (DigAlert). If necessary, the City shall work in close coordination with utility providers to develop a relocation plan to minimize possible impacts and disruption to service utilities. **BPM-USS-4. Reduced Consumption of Water Resources**

Environmental Resource	Mitigation Measures	Best Management Practices (BMP)
		Design features to reduce the consumption of water resources shall be implemented, such as low-flow water fixtures and water efficient irrigation design and practices. In addition, drought-tolerant landscaping shall be planted to further reduce water consumption.

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Chapter 4
Comparison of Alternatives

4.1 Introduction

Section 15126.6(a) of the CEQA Guidelines requires that an EIR "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." In addition, Section 15126.6(e) requires that an EIR evaluate a "no project" alternative. These alternatives are discussed in the sections below.

4.2 CEQA Alternatives

As stated in Chapter 2, the objectives of the proposed Project are to:

- Serve the open space and recreational needs of surrounding communities;
- Connect and improve neighborhoods;
- Incorporate sustainable design consistent with the City's plans and goals;
- Encourage active modes of transportation and public transit;
- Promote beneficial stormwater treatment and/or capture; and
- Provide safe pedestrian and bicycle access to the River.

With implementation of mitigation measures described in Sections 3.1 through 3.16, the proposed Project would not result in significant and unavoidable impacts. Although no significant and unavoidable impacts were identified, the following alternatives to the proposed Project have been evaluated in accordance with Section 15126.6 of the CEQA Guidelines:

- No Project Alternative
- Alternative 1 – Nature Focused Alternative
- Alternative 2 – Sports Focused Alternative

These alternatives are described below.

4.2.1 No Project Alternative

Under the No Project Alternative, the area of the proposed 13-acre Project Site would remain as vacant land and an industrial and freight corridor. The land is comprised of a combination of City, State, and Caltrans right-of-way, which could potentially be used as a storage area. Under the No Project Alternative, no public park amenities would be constructed and no landscaping, lighting, or pedestrian improvements would be made. No improvements to the LA River channel, including terracing and landscaping, would be made.

4.2.2 Alternative 1 – Nature Focused Alternative

Alternative 1 – Nature Focused Alternative is similar to the proposed Project. Under this alternative, the Project Site would be located in the same area as under the proposed Project. Alternative 1 would also include the following elements:

West Park/Arts Plaza

Under Alternative 1, the West Park/Arts Plaza would include the same features and programming as the proposed Project.

East Park

Alternative 1 would feature less programming than the proposed Project, and would include the following elements and activities:

- Approximately 2,000-square-foot building with concessions and public restrooms;
- Two synthetic turf soccer field with field lighting;
- Two flexible play and performance lawns with combined capacity to hold events up to approximately 2,800 people;
- Salvaged bridge light poles and salvaged arch as barrier/seat wall;
- Nature walk and meadow and treed areas;
- Children's nature-play area and splash pad;
- Designated picnic and grilling areas;
- Landscaped seating areas and rain gardens;
- Small dog and large dog play areas; and
- Parking plaza with 14 spaces on-site.

LA River Park Elements

Under Alternative 1, the LA River park elements would include the same features and programming as the proposed Project.

General Park Elements

Under Alternative 1, the general park elements would include the same features and programming as the proposed Project.

4.2.3 Alternative 2 – Sports Focused Alternative

Alternative 2 – Sports Focused Alternative is similar to the proposed Project. Under this alternative, the park would be located in the same area as the proposed Project. Alternative 2 would also include the following elements:

West Park/Arts Plaza

Under Alternative 2, the West Park/Arts Plaza would include the same features and programming as the proposed Project.

East Park

Alternative 2 would feature more programming than the proposed Project, and would include the following elements and activities:

- Approximately 2,000-square-foot building with concessions and public restrooms;
- Two synthetic turf soccer fields with field lighting;
- Two adult-sized flexible sports courts for basketball, futsal, and volleyball with combined capacity to hold events up to approximately 700 people;
- Two flexible play and performance lawns with combined capacity to hold events up to approximately 2,800 people;
- Skate plaza;
- Salvaged bridge light poles and salvaged arch as barrier/seat wall;
- Nature walk and meadow and treed areas;
- Children's nature-play area and splash pad;
- Designated picnic and grilling areas;
- Landscaped seating areas and rain gardens;
- Small dog and large dog play areas; and
- Parking plaza with 14 spaces on-site.

LA River Park Elements

Under Alternative 2, the LA River park elements would include the same features and programming as the proposed Project.

General Park Elements

Under Alternative 2, the general park elements would include the same features and programming as the proposed Project.

4.3 Alternatives Considered but Rejected as Infeasible

Section 15126.6(c) of the State CEQA Guidelines requires that an EIR "identify any alternatives that were considered by the Lead Agency but were rejected as infeasible during the scoping process," as well as explain the reasons for the Lead Agency's determination. An alternative may be eliminated from consideration if it (1) fails to meet most of the project's basic objectives, (2) is infeasible, or (3) is unable to avoid significant environmental impacts.

There are no alternatives that the City can identify that would avoid significant environmental impacts and meet the project's basic objectives. The following alternative was considered and eliminated from further evaluation:

Alternative Project Site. The City already owns the Project Site and cannot reasonably be expected to acquire, control, or access an alternative site that would meet the project's basic objectives in a timely fashion. It is anticipated that significant and unavoidable impacts associated with noise, traffic, water quality, and land use could occur if an Alternative Project Site could be found in Downtown LA, along the LA River. As such, development of the proposed Project at an alternative site could potentially produce other environmental impacts that would otherwise not occur at the current Project Site and result in greater environmental impacts than the proposed Project. Therefore, an alternative site is not considered feasible since the City does not own another suitable site that would achieve the underlying purpose and objectives of the proposed Project.

4.4 Evaluation of CEQA Alternatives

The impacts of each of the alternatives are briefly described below and are compared to the objectives of the proposed Project. The analysis includes a discussion of a No Project Alternative as required under Section 15126(e)(1) of the CEQA Guidelines so that decision-makers can compare the impacts of approving the proposed Project with the impacts of not approving the proposed Project. The proposed Project meets all of the objectives described in Section 4.2, Alternative 1 and Alternative 2 meet some of the objectives, and the No Project Alternative does not meet any of the objectives. Alternatives 1 and 2 would be required to comply with the same mitigation measures that would be implemented for the proposed Project for all environmental resources with a "Less than Significant Impact with Mitigation" determination.

4.4.1 No Project Alternative

Because the area of the proposed 13-acre Project Site would remain as vacant land and an industrial and freight corridor, the objectives of the proposed Project described in Section 4.2 would not be met. Although the No Project Alternative would not result in significant environmental impacts, it would also not include the following benefits that would occur with implementation of the proposed Project, Alternative 1, or Alternative 2:

- **Aesthetics:** The No Project Alternative would not result in the visual character and quality improvements under the proposed Project, Alternative 1, and Alternative 2, which include landscaping, vegetation, recreational areas, and public art.
- **Air Quality:** With the exception of emissions generated from vehicle traffic during large events, the existing industrial land use associated with the No Project Alternative would contribute greater operational emissions than the land uses associated with the proposed Project, Alternative 1, and Alternative 2 (i.e., smaller special events, soccer fields, park uses, and buildings).
- **Energy:** The existing industrial land use associated with the No Project Alternative would require greater energy consumption than the land uses associated with the proposed Project, Alternative 1, and Alternative 2.

- **Greenhouse Gas Emissions:** With the exception of greenhouse gas (GHG) emissions generated from vehicle traffic during infrequent large events (up to 5,000 people), the existing industrial land use associated with the No Project Alternative would contribute greater GHG emissions than the land uses associated with the proposed Project, Alternative 1, and Alternative 2 (i.e., smaller special events, soccer fields, park uses, and buildings).
- **Hazards and Hazardous Materials:** Under the No Project Alternative, contaminated soils would be left in place and would not be remediated to standards acceptable by the Los Angeles County Fire Department (LACoFD) and other regulatory agencies as required.
- **Recreation:** Under the No Project Alternative, there would continue to be a high need for parks in the communities of Boyle Heights and Central City North. The proposed Project, Alternative 1, and Alternative 2 would provide additional park and recreation services that may alleviate the demand for other existing parks and recreational facilities in the vicinity of the Project Area.
- **Noise and Vibration:** Under the No Project Alternative, the existing industrial land use would continue to generate noise at levels greater than that projected for the proposed Project (i.e., special events, soccer fields, park uses, and buildings).
- **Traffic and Transportation:** Under the No Project Alternative, improvements to pedestrian and bicycle access throughout the Project Area would not occur.

4.4.2 Alternative 1 – Nature Focused Alternative

Alternative 1 would meet the objectives of the proposed Project described in Section 4.2. However, Alternative 1 would provide reduced programming compared to the proposed Project. As such, the public indicated greater support for the proposed Project because it would provide a better balance of the open space and recreational needs for the surrounding communities than Alternative 1.

Impacts during construction would be similar to the proposed Project. During operation, Alternative 1 would feature smaller event capacity and reduced recreational programming, which would result in less project-generated vehicle traffic to the Project Site. The impacts for each environmental resource are discussed below.

4.4.2.1 Aesthetics

Impacts would be similar to the proposed Project. Compared to the proposed Project, the East Park would feature more vegetation and landscaping under Alternative 1, which would marginally change the visual character and quality of the Project Site.

4.4.2.2 Air Quality

Impacts would be similar to the proposed Project. Under Alternative 1, event capacity for large events in the proposed East Park would be reduced to 2,800 people, compared to 3,300 people under the proposed Project. In addition, the East Park would feature fewer sports fields under Alternative 1 than under the proposed Project. Because Alternative 1 features less recreational programming than the proposed Project, it is anticipated that Alternative 1 would result in less operational emissions of criteria air pollutants (i.e., reactive organic gas, nitrogen oxides, carbon monoxide, sulfur oxide, and particulate matter) than the proposed Project.

4.4.2.3 Biological Resources

Impacts would be similar to the proposed Project. Like the proposed Project, best management practices (BMP) would be implemented to avoid and minimize construction impacts (i.e., habitat removal; increased noise, vibration, light, carbon dioxide, and human activity; and construction staging and activities in the LA River channel) on special-status species and aquatic resources. Compared to the proposed Project, the East Park would feature more vegetation and landscaping under Alternative 1, which could potentially create additional nesting habitat for special-status birds during operations.

4.4.2.4 Cultural Resources

Impacts would be similar to the proposed Project. Like the proposed Project, standard measures would be implemented in the case of an unanticipated discovery of cultural resources during construction of Alternative 1. As with the proposed Project, operation of Alternative 1 would not involve any ground-disturbing activities; therefore, there would be no potential to disturb, damage, or degrade cultural resources.

4.4.2.5 Energy

Impacts would be similar to the proposed Project. Under the proposed Project and Alternative 1, energy consumption would be required for park lighting, WiFi, security cameras, on-site buildings, electric vehicle charging station, and sound and lighting equipment for special events. In addition, diesel and gasoline fuel would be consumed from on-road vehicles. Under Alternative 1, smaller event capacity and reduced recreational programming would reduce energy consumption, when compared to the proposed Project. Therefore, energy consumption would be marginally less under Alternative 1.

4.4.2.6 Geology and Soils

Impacts would be similar to the proposed Project. Like the proposed Project, BMPs would be implemented to reduce the potential for erosion during soil excavation and other construction activities. In addition, Alternative 1 would follow standard engineering practices and recommendations identified in the *Geotechnical Site Investigation* (Hushmand Associates, Inc., 2018) to reduce the potential for geologic hazards. Similar to the proposed Project, open spaces would be landscaped or hardscaped such that soil erosion and the loss of topsoil are not anticipated during operation of Alternative 1.

4.4.2.7 Greenhouse Gas Emissions

Impacts would be similar to the proposed Project. Under the proposed Project and Alternative 1, the majority of GHG emissions would be associated with motor vehicle use. Under Alternative 1, smaller event capacity and reduced recreational programming would reduce motor vehicle use to the Project Site, when compared to the proposed Project. Therefore, GHG emissions would be marginally less under Alternative 1.

4.4.2.8 Hazards and Hazardous Materials

Impacts would be similar to the proposed Project. Like the proposed Project, Alternative 1 would result in remediation of the Project Site to standards acceptable by LACoFD and other regulatory agencies as required. Under these standards, the concentrations of contaminants of concern would not pose health

risks to construction workers or the public. The use of hazardous materials during construction or during routine maintenance and landscaping would be subject to proper handling and disposal in compliance with applicable laws and regulations.

4.4.2.9 Hydrology and Water Quality

Impacts would be similar to the proposed Project. Like the proposed Project, Alternative 1 would result in the net addition of impervious surfaces. However, this minor increase would not substantially deplete groundwater supplies, interfere with groundwater recharge, or increase the potential for flooding. Alternative 1 would include construction and low impact development (LID) BMPs to prevent, control, and reduce the potential for stormwater pollutants to degrade ground or surface water quality.

4.4.2.10 Land Use and Planning

Impacts would be similar to the proposed Project. Like the proposed Project, Alternative 1 is consistent with the City's General Plan land use and zoning designations. The City Bureau of Engineering would continue to work with the Los Angeles Department of City Planning to ensure that Alternative 1 is consistent with future zoning changes.

4.4.2.11 Noise and Vibration

Impacts would be similar to the proposed Project. Under the proposed Project and Alternative 1, operational noise levels would be associated with project-generated vehicle traffic and onsite recreational uses and events. Alternative 1 features smaller event capacity and reduced recreational programming than the proposed Project. Therefore, operational noise levels would be marginally less under Alternative 1 compared to the proposed Project.

4.4.2.12 Population and Housing

Impacts would be similar to the proposed Project. Like the proposed Project, Alternative 1 would not have the potential to result in growth that would otherwise not occur.

4.4.2.13 Public Services

Impacts would be similar to the proposed Project. Like the proposed Project, Alternative 1 could increase the demand for fire and police protection services; however, the expansion or construction of new fire or police protection facilities would not be required. Alternative 1 would provide additional recreation and park services that may alleviate the demand for other existing parks and recreational facilities in the vicinity of the Project Area.

4.4.2.14 Recreation

Impacts would be similar to the proposed Project. Like the proposed Project, Alternative 1 would provide additional recreation and park services that may alleviate the demand for other existing parks and recreational facilities in the vicinity of the Project Area.

4.4.2.15 Transportation and Traffic

Impacts from proposed construction activities would be similar to the proposed Project. Under Alternative 1, event capacity for large events in the proposed East Park would be reduced to 2,800 people, compared to 3,300 people under the proposed Project. In addition, the East Park would feature fewer sports fields under Alternative 1 than under the proposed Project. Because Alternative 1 features smaller event capacity and reduced recreational programming than the proposed Project, project-generated vehicle traffic would be marginally less under Alternative 1. In addition, the demand for parking under Alternative 1 during large events would be marginally reduced compared to the proposed Project.

4.4.2.16 Utilities and Service Systems

Impacts would be similar to the proposed Project. Like the proposed Project, construction activities for Alternative 1 would be conducted in accordance with the Stormwater Pollution Prevention Plan (SWPPP) and all other applicable laws, policies, and regulations to avoid and minimize potential impacts. The water consumption and wastewater generation demands for operation of Alternative 1, like the proposed Project, would not require the construction of new water or wastewater treatment facilities or the expansion of existing facilities.

4.4.3 Alternative 2 – Sports Focused Alternative

Alternative 2 would meet the objectives of the proposed Project described in Section 4.2. However, Alternative 2 would provide increased programming compared to the proposed Project. As such, the public indicated greater support for the proposed Project because it would provide a better balance of the open space and recreational needs for the surrounding communities than Alternative 2.

Impacts during construction would be similar to the proposed Project. During operation, Alternative 2 would feature larger event capacity and increased recreational programming, which would result in more project-generated vehicle traffic to the Project Site. The impacts for each environmental resource are discussed below.

4.4.3.1 Aesthetics

Impacts would be similar to the proposed Project. Compared to the proposed Project, the East Park would feature less vegetation and landscaping under Alternative 2, which would marginally change the visual character and quality of the Project Site.

4.4.3.2 Air Quality

Impacts would be similar to the proposed Project. Under Alternative 2, event capacity for large events in the proposed East Park would be increased to 3,500 people, compared to 3,300 people under the proposed Project. In addition, the East Park would feature more sports fields under Alternative 2 than under the proposed Project. Because Alternative 2 features more recreational programming than the proposed Project, it is anticipated that Alternative 2 would result in greater operational emissions of criteria air pollutants (i.e., reactive organic gas, nitrogen oxides, carbon monoxide, sulfur oxide, and particulate matter) than the proposed Project.

4.4.3.3 Biological Resources

Impacts would be similar to the proposed Project. Like the proposed Project, BMPs would be implemented to avoid and minimize construction impacts (i.e., habitat removal; increased noise, vibration, light, carbon dioxide, and human activity; and construction staging and activities in the LA River channel) on special-status species and aquatic resources. Compared to the proposed Project, the East Park would feature less vegetation and landscaping under Alternative 2, which would create less nesting habitat for special-status birds during operations.

4.4.3.4 Cultural Resources

Impacts would be similar to the proposed Project. Like the proposed Project, standard measures would be implemented in the case of an unanticipated discovery of cultural resources during construction of Alternative 2. As with the proposed Project, operation of Alternative 2 would not involve any ground-disturbing activities; therefore, there would be no potential to disturb, damage, or degrade cultural resources.

4.4.3.5 Energy

Impacts would be similar to the proposed Project. Like the proposed Project, energy consumption would be required for park lighting, WiFi, security cameras, on-site buildings, electric vehicle charging station, and sound and lighting equipment for special events. In addition, diesel and gasoline fuel would be consumed from on-road vehicles. Under Alternative 2, larger event capacity and increased recreational programming would increase energy consumption, when compared to the proposed Project. Therefore, energy consumption would be marginally greater under Alternative 2.

4.4.3.6 Geology and Soils

Impacts would be similar to the proposed Project. Like the proposed Project, BMPs would be implemented to reduce the potential for erosion during soil excavation and other construction activities. In addition, Alternative 2 would follow standard engineering practices and recommendations identified in the *Geotechnical Site Investigation* (Hushmand Associates, Inc., 2018) to reduce the potential for geologic hazards. Similar to the proposed Project, open spaces would be landscaped or hardscaped such that soil erosion and the loss of topsoil are not anticipated during operation of Alternative 2.

4.4.3.7 Greenhouse Gas Emissions

Impacts would be similar to the proposed Project. Under the proposed Project, Alternative 1, and Alternative 2, the majority of GHG emissions would be associated with motor vehicle use. Under Alternative 2, larger event capacity and increased recreational programming would increase motor vehicle use to the Project Site, when compared to the proposed Project. Therefore, GHG emissions would be marginally greater under Alternative 2.

4.4.3.8 Hazards and Hazardous Materials

Impacts would be similar to the proposed Project. Like the proposed Project, Alternative 2 would result in remediation of the Project Site to standards acceptable by LACoFD and other regulatory agencies as required. Under these standards, the concentrations of contaminants of concern would not pose health

risks to construction workers or the public. The use of hazardous materials during construction or during routine maintenance and landscaping would be subject to proper handling and disposal in compliance with applicable laws and regulations.

4.4.3.9 Hydrology and Water Quality

Impacts would be similar to the proposed Project. Like the proposed Project, Alternative 2 would result in the net addition of impervious surfaces. However, this minor increase would not substantially deplete groundwater supplies, interfere with groundwater recharge, or increase the potential for flooding. Alternative 1 would include construction and low impact development (LID) BMPs to prevent, control, and reduce the potential for stormwater pollutants to degrade ground or surface water quality.

4.4.3.10 Land Use and Planning

Impacts would be similar to the proposed Project. Like the proposed Project, Alternative 2 is consistent with the City's General Plan land use and zoning designations. The City Bureau of Engineering would continue to work with the Los Angeles Department of City Planning to ensure that Alternative 2 is consistent with future zoning changes.

4.4.3.11 Noise and Vibration

Impacts would be similar to the proposed Project. Under the proposed Project, Alternative 1, and Alternative 2, operational noise levels would be associated with project-generated vehicle traffic and onsite recreational uses and events. Alternative 2 features larger event capacity and increased recreational programming than the proposed Project. Therefore, operational noise levels would be marginally greater under Alternative 2 compared to the proposed Project.

4.4.3.12 Population and Housing

Impacts would be similar to the proposed Project. Like the proposed Project, Alternative 2 would not have the potential to result in growth that would otherwise not occur.

4.4.3.13 Public Services

Impacts would be similar to the proposed Project. Like the proposed Project, Alternative 2 could increase the demand for fire and police protection services; however, the expansion or construction of new fire or police protection facilities would not be required. Alternative 2 would provide additional recreation and park services that may alleviate the demand for other existing parks and recreational facilities in the vicinity of the Project Area.

4.4.3.14 Recreation

Impacts would be similar to the proposed Project. Like the proposed Project, Alternative 2 would provide additional recreation and park services that may alleviate the demand for other existing parks and recreational facilities in the vicinity of the Project Area.

4.4.3.15 Transportation and Traffic

Impacts from proposed construction activities would be similar to the proposed Project. Under Alternative 2, event capacity for large events in the proposed East Park would be increased to 3,500 people, compared to 3,300 people under the proposed Project. In addition, the East Park would feature more sports fields under Alternative 2 than under the proposed Project. Because Alternative 2 features larger event capacity and increased recreational programming than the proposed Project, project-generated vehicle traffic would be marginally greater under Alternative 2. In addition, the demand for parking under Alternative 2 during large events would be marginally greater compared to the proposed Project.

4.4.3.16 Utilities and Service Systems

Impacts would be similar to the proposed Project. Like the proposed Project, construction activities for Alternative 2 would be conducted in accordance with the SWPPP and all other applicable laws, policies, and regulations to avoid and minimize potential impacts. The water consumption and wastewater generation demands for operation of Alternative 2, like the proposed Project, would not require the construction of new water or wastewater treatment facilities or the expansion of existing facilities.

4.5 Comparison of CEQA Alternatives

Table 4-1 compares the potential environmental impacts that would result from the proposed Project, No Project Alternative, Alternative 1 – Nature Focused Alternative, and Alternative 2 – Sports Focused Alternative. **Table 4-2** summarizes the environmental impacts of each alternative compared to the proposed Project. **Table 4-3** summarizes the impacts of each alternative compared to the existing condition and ranks each alternative based on these relative environmental impacts.

As noted in Section 4.4, the proposed Project, Alternative 1, and Alternative 2 would have similar impacts. However, as shown in **Table 4-2**, impacts would be relatively reduced under Alternative 1 and relatively greater under Alternative 2, when compared to the proposed Project. As shown in **Table 4-3**, when compared to the existing condition, Alternative 1 would result in a slight increase in impacts, followed by the proposed Project. Alternative 2 would result in the greatest increase in impacts when compared to the existing condition.

Impacts under Alternative 1 would be marginally less than the proposed Project because of the reduced programming, smaller event sizes, and reduced project-generated vehicle traffic (see Section 4.4.2). Alternative 2 would result in the greatest impacts because of the increased programming, larger event sizes, and increased project-generated vehicle traffic (see Section 4.2.3).

The No Project Alternative would result in no impacts to the existing land use because it would not result in an action and would not require discretionary approvals that trigger CEQA compliance; however, it would not provide the benefits that would result from implementation of the proposed Project, Alternative 1, or Alternative 2 (see Section 4.4.1), nor would it meet the proposed Project objectives.

Table 4-1: Summary of CEQA Analysis by Alternative

Environmental Resource	No Project Alternative	Proposed Project	Alternative 1 – Nature Focused Alternative	Alternative 2 – Sports Focused Alternative
Aesthetics				
Construction	No Impact.	Less than Significant Impact.	Less than Significant Impact.	Less than Significant Impact.
Operation		Less than Significant Impact.	Less than Significant Impact.	Less than Significant Impact.
Air Quality				
Construction	No Impact.	Less than Significant Impact with Mitigation.	Less than Significant Impact with Mitigation.	Less than Significant Impact with Mitigation.
Operation		Less than Significant Impact.	Less than Significant Impact. Environmentally Superior.	Less than Significant Impact.
Biological Resources				
Construction	No Impact.	Less than Significant Impact.	Less than Significant Impact.	Less than Significant Impact.
Operation		Less than Significant Impact.	Less than Significant Impact.	Less than Significant Impact.
Cultural Resources				
Construction	No Impact. Environmentally Superior.	Less than Significant Impact.	Less than Significant Impact.	Less than Significant Impact.
Operation		Less than Significant Impact.	Less than Significant Impact.	Less than Significant Impact.
Energy				
Construction	No Impact.	Less than Significant Impact.	Less than Significant Impact.	Less than Significant Impact.
Operation		Less than Significant Impact.	Less than Significant Impact. Environmentally Superior.	Less than Significant Impact.
Geology and Soils				
Construction	No Impact.	Less than Significant Impact.	Less than Significant Impact.	Less than Significant Impact.

Environmental Resource	No Project Alternative	Proposed Project	Alternative 1 – Nature Focused Alternative	Alternative 2 – Sports Focused Alternative
Operation	Environmentally Superior.	Less than Significant Impact.	Less than Significant Impact.	Less than Significant Impact.
Greenhouse Gas Emissions				
Construction	No Impact.	Less than Significant Impact.	Less than Significant Impact.	Less than Significant Impact.
Operation		Less than Significant Impact.	Less than Significant Impact. Environmentally Superior.	Less than Significant Impact.
Hazards and Hazardous Materials				
Construction	No Impact.	Less than Significant Impact with Mitigation.	Less than Significant Impact with Mitigation.	Less than Significant Impact with Mitigation.
Operation		Less than Significant Impact with Mitigation.	Less than Significant Impact with Mitigation.	Less than Significant Impact with Mitigation.
Hydrology and Water Quality				
Construction	No Impact.	Less than Significant Impact.	Less than Significant Impact.	Less than Significant Impact.
Operation		Less than Significant Impact with Mitigation.	Less than Significant Impact with Mitigation.	Less than Significant Impact with Mitigation.
Land Use and Planning				
Construction	No Impact.	Less than Significant Impact.	Less than Significant Impact.	Less than Significant Impact.
Operation		Less than Significant Impact.	Less than Significant Impact.	Less than Significant Impact.
Noise and Vibration				
Construction	No Impact.	Less than Significant Impact with Mitigation.	Less than Significant Impact with Mitigation.	Less than Significant Impact with Mitigation.
Operation		Less than Significant Impact.	Less than Significant Impact. Environmentally Superior.	Less than Significant Impact.

Environmental Resource	No Project Alternative	Proposed Project	Alternative 1 – Nature Focused Alternative	Alternative 2 – Sports Focused Alternative
Population and Housing				
Construction	No Impact. Environmentally Superior.	Less than Significant Impact.	Less than Significant Impact.	Less than Significant Impact.
Operation		Less than Significant Impact.	Less than Significant Impact.	Less than Significant Impact.
Public Services				
Construction	No Impact. Environmentally Superior.	Less than Significant Impact.	Less than Significant Impact.	Less than Significant Impact.
Operation		Less than Significant Impact.	Less than Significant Impact.	Less than Significant Impact.
Recreation				
Construction	No Impact.	Less than Significant Impact.	Less than Significant Impact.	Less than Significant Impact.
Operation		Less than Significant Impact.	Less than Significant Impact.	Less than Significant Impact.
Transportation and Traffic				
Construction	No Impact.	Less than Significant Impact.	Less than Significant Impact.	Less than Significant Impact.
Operation		Less than Significant Impact with Mitigation.	Less than Significant Impact with Mitigation. Environmentally Superior.	Less than Significant Impact with Mitigation.
Utilities and Service Systems				
Construction	No Impact. Environmentally Superior.	Less than Significant Impact.	Less than Significant Impact.	Less than Significant Impact.
Operation		Less than Significant Impact with Mitigation.	Less than Significant Impact with Mitigation.	Less than Significant Impact with Mitigation.

Table 4-2: Comparison of Alternatives to the Proposed Project (Operational)

Environmental Resource	Proposed Project	Alternative 1 – Nature Focused Alternative	Alternative 2 – Sports Focused Alternative
Aesthetics	0	0	0
Air Quality	0	-1	+1
Biological Resources	0	-1	+1
Cultural Resources	0	0	0
Energy	0	-1	+1
Geology and Soils	0	0	0
Greenhouse Gas Emissions	0	-1	+1
Hazards and Hazardous Materials	0	0	0
Hydrology and Water Quality	0	0	0
Land Use and Planning	0	0	0
Noise and Vibration	0	-1	+1
Population and Housing	0	0	0
Public Services	0	-1	+1
Recreation	0	0	0
Transportation/Traffic	0	-1	+1
Utilities and Service Systems	0	0	0
Total	**0**	**-7**	**+7**

Notes:
(-3) = Impacts considered to be substantially reduced when compared with the proposed Project.
(-2) = Impacts considered to be moderately reduced when compared with the proposed Project.
(-1) = Impacts considered to be somewhat reduced when compared with the proposed Project.
(0) = Impacts considered to be equal to the proposed Project.
(+1) = Impacts considered to be somewhat increased when compared with the proposed Project.
(+2) = Impacts considered to be moderately increased when compared with the proposed Project.
(+3) = Impacts considered to be substantially increased when compared with the proposed Project.
Where significant unavoidable impacts would occur across different alternatives but there are impact intensity differences between those alternatives, numeric differences are used to differentiate alternatives (i.e., in some cases, there are differences at the individual impact level, such as differences in number of impacts or relative intensity).

Table 4-3: Comparison of Alternatives to the Existing Condition (Operational)

Environmental Resource	Proposed Project	Alternative 1 – Nature Focused Alternative	Alternative 2 – Sports Focused Alternative	No Project Alternative
Aesthetics	-2	-2	-2	0
Air Quality	-1	-2	-1	0
Biological Resources	-1	-2	-1	0
Cultural Resources	0	0	0	0
Energy	-1	-2	-1	0
Geology and Soils	0	0	0	0
Greenhouse Gas Emissions	-1	-2	-1	0
Hazards and Hazardous Materials	+2	+2	+2	0
Hydrology and Water Quality	+1	+1	+1	0
Land Use and Planning	0	0	0	0
Noise and Vibration	-1	-1	-1	0
Population and Housing	0	0	0	0
Public Services	-1	-1	-1	0
Recreation	-2	-2	-2	0
Transportation/Traffic	+1	+1	+2	0
Utilities and Service Systems	0	0	0	0
Total	**-6**	**-10**	**-5**	**0**
Ranking	**2**	**1**	**3**	**0**

Notes:
(-3) = Impacts considered to be substantially reduced when compared with the existing condition.
(-2) = Impacts considered to be moderately reduced when compared with the existing condition.
(-1) = Impacts considered to be somewhat reduced when compared with the existing condition.
(0) = Impacts considered to be equal to the existing condition.
(+1) = Impacts considered to be somewhat increased when compared with the existing condition.
(+2) = Impacts considered to be moderately increased when compared with the existing condition.
(+3) = Impacts considered to be substantially increased when compared with the existing condition.
Where significant unavoidable impacts would occur across different alternatives but there are impact intensity differences between those alternatives, numeric differences are used to differentiate alternatives (i.e., in some cases, there are differences at the individual impact level, such as differences in number of impacts or relative intensity).

4.6 Environmentally Superior Alternative

Section 15126.6 of the CEQA Guidelines requires that an "environmentally superior" alternative be identified. The environmentally superior alternative is the alternative that would be expected to generate the least amount of significant impacts. As shown in **Table 4-1**, none of the alternatives would result in significant impacts. Although the No Project Alternative would result in the fewest impacts on the existing environment, this alternative would not result in the improvements anticipated under the proposed Project, Alternative 1, or Alternative 2. The No Project Alternative would not result in the following improvements, as described in Section 4.4.1: enhanced visual character and quality of the Project Site, remediated soils, increased park and recreational facilities, and improved bicycle and pedestrian access. In addition, the existing industrial land use under the No Project Alternative would contribute greater air quality and greenhouse gas emissions and noise and vibration levels than the land uses associated with the proposed Project (except during large events).

Pursuant to Section 15126.6(e)(2) of the CEQA Guidelines, when the No Project Alternative is identified as the environmentally superior alternative, the EIR must also identify an environmentally superior alternative from the remaining alternatives. As noted in **Table 4-1**, impacts associated with the proposed Project, Alternative 1, and Alternative 2 would be similar. Under Alternative 1, smaller event capacity and reduced recreational programming would result in less project-generated vehicle traffic to the Project Site than the proposed Project. As such, implementation of Alternative 1 would result in marginally less impacts to Air Quality, Energy, Greenhouse Gas Emissions, Noise and Vibration, and Transportation and Traffic than the proposed Project. Therefore, Alternative 1 is considered the Environmentally Superior Alternative.

CEQA Guidelines do not require an agency to select the environmentally superior alternative (CEQA Guidelines 15042-15043). Because Alternative 1 would provide reduced programming compared to the proposed Project, it would not meet the recreational needs of the surrounding communities. At the community meetings, the public overwhelmingly supported the proposed Project as the preferred alternative because it meets all of the objectives described in Section 4.2.

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Chapter 5
Other Environmental Considerations

This chapter evaluates other environmental considerations, including effects found to be not significant, based on analysis contained in the Initial Study (IS) (see **Appendix A** of this Draft Environmental Impact Report [EIR]), and therefore were subsequently omitted from analysis in this Draft EIR. It also addresses significant irreversible environmental changes that would be caused by the proposed Project should it be implemented, including the use and consumption of nonrenewable resources or long-term commitments of these resources. The proposed Project's potential for growth inducement is also addressed in this section.

5.1 Effects Found Not to Be Significant

Section 15128 of the California Environmental Quality Act (CEQA) Guidelines states that "an EIR shall contain a statement briefly indicating the reasons that various possible significant effects of the project were determined not to be significant and were therefore not discussed in detail in the EIR. Such a statement may be contained in an attached copy of an [IS]."

In accordance with the requirements of CEQA, the City of Los Angeles (City) prepared an IS, dated April 13, 2017, that identified the topics to be analyzed in the EIR. The IS is contained in **Appendix A** of this Draft EIR.

Because the analysis contained in the IS determined that the proposed Project would result in less than significant or no impacts related to the following environmental resource areas, they were eliminated from further analysis:

- Agriculture and Forestry Resources
- Mineral Resources

In addition, the analysis contained in the IS also determined that some thresholds of significance for environmental resources addressed in this Draft EIR could be eliminated. These include the following:

- Aesthetics
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise and Vibration
- Population and Housing
- Public Services
- Transportation and Traffic
- Utilities and Service Systems

As noted in the IS, the thresholds of significance eliminated for further analysis for each of these environmental resources are noted by the statement, "This issue is not proposed for further analysis in the EIR." The supporting analysis, findings, and conclusions in support of this determination are provided for each of these.

After analysis of the remaining thresholds in the Draft EIR, impacts related to the following issues were determined to be less than significant or less than significant with the implementation of mitigation measures:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources and Tribal Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise and Vibration
- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
- Utilities and Service Systems

5.2 Significant Irreversible Environmental Changes That Would Be Caused by the Proposed Project Should It Be Implemented

Section 15126.2(c) of the CEQA Guidelines indicates that uses of nonrenewable resources during the initial and continued phases of a project may be irreversible because a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as a street improvement that provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with a project. Irretrievable commitments of resources should be evaluated to ensure that such current consumption is justified.

Implementing the proposed Project would commit nonrenewable (e.g., petroleum) or slowly renewable (e.g., timber) resources during construction and operation. In order to construct the proposed Project, machinery, equipment, materials (e.g., lumber, sand, gravel), and workers would be required, representing an irreversible commitment of some of these resources. Similarly, during operation, some of these resources (e.g., energy, electricity) would again be needed, representing a long-term commitment and permanent investment. The consumption and use of some of these resources would limit their availability for future generations. However, the proposed Project would provide public recreational facilities to communities that demonstrate high need. In addition, the proposed Project would be designed to meet the City's sustainability and active transportation goals. Therefore, the significant irreversible changes have been deemed acceptable in light of the proposed Project's overall benefits.

5.3 Growth-Inducing Impacts

Section 15126.2(d) of the CEQA Guidelines indicates the following relative to growth-inducement:

> Discuss the way in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

A proposed project can result in both direct and indirect growth-inducing impacts. Typically, the development of new housing would result in direct growth-inducement, while the development of new employment opportunities (both short- and long-term) would result in indirect growth-inducement. The removal of an obstacle to growth, such as construction of a necessary public service of infrastructure can also result in indirect growth-inducement. If not considered in local land use or growth management plans, such projects can result in potentially significant and adverse impacts.

As stated in Chapter 2, Project Description, the overall objectives of the proposed Project are to (1) serve the open space and recreational needs of surrounding communities; (2) connect and improve neighborhoods; (3) incorporate sustainable design consistent with the City's plans and goals; (4) encourage active modes of transportation and public transit; (5) promote beneficial stormwater treatment and/or capture; and (6) provide safe pedestrian and bicycle access to the River. The proposed Project is not intended to facilitate growth but instead serve the recreational needs of the local surrounding communities.

5.4 Direct Population-Generating Uses

The proposed Project does not include the development of new housing or other population-generating uses that would directly induce population growth or attract a substantial number or workers, nor would it tax existing community service facilities, thereby requiring the construction of new facilities, which could cause significant environmental effects. Population-generating uses are not proposed. Furthermore, the proposed Project is considered infill and is located in a highly urbanized area that experienced significant development over the past century, and the service area is primarily built out. Therefore, the proposed Project would not directly induce new residential development or result in population growth in the service area. Impacts would be less than significant, and mitigation would not be required.

5.5 Growth Accommodation

The population of the area served by the proposed Project has been growing and is projected to keep growing regardless of whether the proposed Project is implemented. Furthermore, the proposed Project would meet the current and future need for parks and recreational facilities in communities that

demonstrate high need. Therefore, the proposed Project is not growth inducing but, rather, growth accommodating. Impacts would be less than significant, and mitigation would not be required.

5.6 Expansion of Public Services or Utilities

Since the proposed Project involves creating public recreational facilities, it inherently involves the expansion of a public service. However, the improvements would be growth accommodating rather than growth inducing, as described in Section 5.5. Although the proposed Project would involve the creation of a public facility, it would not induce population growth but, rather, accommodate growth that would occur independent of the proposed Project implementation and meet the existing need for parks and recreational facilities. Impacts would be less than significant, and mitigation would not be required.

Chapter 6
Preparers, Contributors, and Oversight

6.1 City of Los Angeles

Bureau of Engineering

Deborah Weintraub, Chief Deputy City Engineer

Mary Nemick, Director of Communications

Julie Allen, Sixth Street Viaduct Division Manager

Gary Lam, Senior Civil Engineer

Natalie Moore, Civil Engineering Associate II

Dr. Jan Green Rebstock, Environmental Supervisor II

Amanda Griesbach Amaral, Environmental Specialist III

Talmadge Maxwell Jordan, Environmental Specialist II

Department of Recreation and Parks

Tom Gibson, Landscape Architect

Elena Maggioni, Environmental Specialist II

Bureau of Sanitation

Deborah Deets, Landscape Architect

Department of Cultural Affairs

Becky Snodgrass, Program Manager

Councilmember Kevin de León, 14th District

Nate Hayward, Capital Projects Director

Rocio Hernandez, Boyle Heights Area Director (former)

Miriam Rodriguez, Boyle Heights Area Director

6.2 TetraTech

Mauricio Argente, Vice President

Justin Smith, Project Engineer

6.3 GPA Consulting

Richard Galvin, Vice President/Principal Environmental Planner

Glenn Lajoie, Principal Planner and Environmental Manager

Sylvia Vega, Principal Environmental Planner

George Gorman, Senior Environmental Planner

Nicole Greenfield, Associate Environmental Planner

Allie Acuña, Associate Environmental Planner

Danielle Thayer, Associate Environmental Planner

Alen Estrada-Rodas, Environmental Planner

Buddy Burch, Environmental Planner

Justin Nguyen, Environmental Planner

Noeli Topete, Environmental Planner

Martin Rose, Senior GIS Analyst

Marieka Schrader, Senior Associate Environmental Planner/Biologist

Adelina Munoz, Senior Biologist

Angela Scudiere, Senior Biologist

Hannah Hart, Biologist

Jenna Kachour, Senior Preservation Planner

Allison Lyons, Associate Architectural Historian

6.4 AMBIENT Air Quality & Noise Consulting

Kurt Legleiter, Principal

6.5 Applied EarthWorks, Inc.

Mary Clark Balonian, President/Principal Archaeologist

Tiffany Clark, Senior Archaeologist/Project Manager

Amy Ollendorf, Program Manager Paleontology

Chrisotpher Shi, Paleontology Supervisor

Scott Rohlf, Associate Paleontologist

6.6 Kimley-Horn and Associates, Inc.

Greg Kyle, QA/QC

Sri Chakravarthy, Project Manager

Carlie Campuzano, Senior Project Engineer

Laura Forinash, Project Engineer

Rossina Chichiri, Technical Support

Matt Stewart, Analyst

Kathleen Nguyen, Analyst

6.7 Hushmand Associates, Inc.

Naresh Bellana, Senior Staff Engineer

6.8 Hargreaves Associates

Mary Margaret Jones, President

Gavin McMillan, Senior Principal

Megan Esopenko, Landscape Designer

6.9 Michael Maltzan Architecture

Michael Maltzan, Design Principal

Tim Williams, Managing Principal

Paul Stoelting, Project Manager

6.10 FAST – Fixing Angelenos Stuck in Traffic/Urban Strategy Group

Hilary Norton, Executive Director, Community Relations Strategist

Arturo Gonzalez, Director of Community Affairs

Joanna Amador, Community Relations Coordinator, Urban Strategy Group

6.11 Urban Design Center

Griffin Wright, Project Manager

6.12 Stacy and Witbeck, Inc

Robert Thorpe, Engineer

6.13 Kaino Co

Glenn Kaino, Conceptual Artist

Taked Royer

Gideon Webster

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Chapter 8
Acronyms and Abbreviations

°F	Fahrenheit
%	Percentage
AAM	Annual Arithmetic Mean
AB	Assembly Bill
ACHP	Advisory Council on Historic Preservation
ACM	Asbestos containing materials
ACS	American Community Survey
ADA	American with Disabilities Act
ADL	Aerially Deposited Lead
AGR	Agricultural Supply
AHERA	Asbestos Emergency Response Act
APS	Alternative Planning Strategy
AQMP	Air Quality Management Plan
ARG	Agricultural Supply
Art Piece	30-foot tall public art piece
ASL	Advanced Life Support
ASTM	Association of Testing Materials
ATCS	Adaptive Traffic Control System
ATP	Active Transportation Program
ATSAC	Automated Traffic Surveillance and Control
BACT	Best Available Control Technology
Basin	Los Angeles Basin
Basin Plan	Los Angeles Basin Water Quality Control Plan
BAU	Business-as-usual
bgs	Below ground surface
BIOS	Biogeographic Information and Observation System
BMP	Best Management Practices
BNSF	Burlington Northern Santa Fe
BOD	Biochemical Oxygen Demand
BOE	Bureau of Engineering (Department of Public Works)
BPW	Board of Public Works
BRR	Biological Resources Report
BSC	Building Standards Commission
BTU	British Thermal Units
C_2F_6	perfluoropropane
C_2H_3Cl/VCM	Vinyl Chloride

C_3F_8	perfluoropropane
C_4F_{10}	perfluorobutane
C_4F_8	perfluorocyclobutane
C_5F_{12}	perfluoropentane
C_6F_{14}	perfluorohexane
CA	California
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
Caltrans	California Department of Transportation
Calveno	California Vehicle Noise
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CF_4	perfluoromethane
CFR	Code of Federal Regulations
cfs	Cubic Feet per Second
CGS	California Geological Survey
CH_4	Methane
CIA	Community Impact Assessment
City	City of Los Angeles
CLARTS	Central Los Angeles Recycling and Transfer Station
CMA	Critical Movement Analysis
CMP	Congestion Management Plan
CNDDB	California Natural Diversity Database
CNEL	Community Equivalent Noise Level
CNMP	Construction Noise Management Plan
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	carbon dioxide equivalents

COPC	Chemicals of Potential Concern
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CTR	California Toxics Rule
CUPA	Certified Unified Program Agencies
CWA	Clean Water Act
CWC	California Water Code
dB	Decibels
dBA	A-weighted decibels
dBA CNEL	Average-daily noise level
DigAlert	Underground Service Alert of Southern California
District	Downtown Los Angeles Industrial Historic District
DO	Oxygen, Dissolved
DPM	Diesel exhaust particulate matter
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
EMS	Emergency Medical Service
EPC	Exposure Point Concentration
EPCRA	Emergency Planning and Community Right-to-Know Act
ESA	Environmental Site Assessment
FCAA	Federal Clean Air Act
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FTA	Federal Transit Administration
General Plan	City of Los Angeles General Plan
GHG	Greenhouse Gas
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
GWh	Gigawatt hours
GWP	Global Warming Potential
GWR	Ground Water Recharge
H_2S	Hydrogen Sulfide
HAP	Hazardous Air Pollutants
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations and Emergency Response
HCM	Highway Capacity Manual
HCM	Historic Cultural Monuments
HFC	Hydrofluorocarbons
HHRA	Human Health Risk Assessment

HI	Hazard Index
HSC	State Health and Safety Code
Hz	Hertz
I-10	Interstate 10
I-5	Interstate 5
ID	Identification
IES	Illuminating Engineering Society
ILCR	Incremental Lifetime Cancer Risk
In/sec	inches per second
IND	Industrial Service Supply
IPaC	Information for Planning and Consultation
IS	Initial Study
kBTU	Kilo-British Thermal Units
KOP	Key Observation Point
kV	kilovolt
kWh	Kilowatt Hours
LA	Los Angeles
LA & SP	Los Angeles and San Pedro Railroad
LA River	Los Angeles River
LABOE	City of Los Angeles Department of Public Works, Bureau of Engineering
LACoFD	Los Angeles County Fire Department
LADOT	Los Angeles Department of Transportation
LADWP	Los Angeles Department of Water and Power
LAFD	Los Angeles Fire Department
LAGBC	Los Angeles Green Building Code
LAHCM	Los Angeles Historic Cultural Monument
LAHSA	Los Angeles Homeless Services Authority
LAMC	City of Los Angeles Municipal Code
LAMC	Los Angeles Municipal Code
LAPD	Los Angeles Police Department
LARRMP	Los Angeles River Revitalization Master Plan
LARWQCB	Los Angeles Regional Water Quality Control Board
Lbs/day	Pounds per day
L_{dn}	Day-Night Average Noise Level
L_{eq}	Energy Equivalent Noise Level
LID	Low-Impact Development
L_{max}	Maximum Noise Level
L_{min}	Minimum Noise Level
LOS	Level of Service
LST	Localized Significance Threshold

LUST	Leaking Underground Storage Tank
MBAS	Methylene Blue Activated Substances
MBTA	Migratory Bird Treaty Act
MEP	Maximum Extent Possible
Metro	Los Angeles County Metropolitan Transportation Authority
MFR	Multi-family Residential
Mg/L	Milligrams per Liter
MLD	Most Likely Descendant
MMBTU	Million British Thermal Units
MMT	Metric Meter Tons
MMT	Million Metric Tons
$MMTCO_2e$	Million Metric Tons of Carbon Dioxide Equivalent
MOW	Maintenance of Way
MPO	Metropolitan Planning Organization
MS4s	Municipal separate storm sewer systems
MUN	Municipal and Domestic Supply
MWD	Metropolitan Water District of Southern California
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
ND	Non-detect
NESHAP	National Emission Standards for Hazardous Air Pollutants
NF_3	Nitrogen Trifluoride
Ng/L	Nanograms per Liter
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NMFS	National Marine Fisheries Service
NO_2	Nitrogen Dioxide
NO_2-N	Nitrite-nitrogen
NO_3	Nitrate
NO_3-N	Nitrate-nitrogen
NO_3-N + NO_2-N	Nitrogen as nitrate-nitrogen plus nitrite-nitrogen
NOA	Naturally Occurring Asbestos
NOA	Notice of Availability
NOD	Notice of Determination
NOI	Notice of Intent
NOP	Notice of Preparation
NOP/IS	Notice of Preparation/Initial Study
NOx	Nitrogen oxide
NPDES	National Pollutant Discharge Elimination System

NTU	Nephelometric Turbidity Units
°	Degrees
O_3	Ozone
OEHHA	Office of Environmental Health Hazard Assessment
OHWM	Ordinary High-Water Mark
OS	Open Space
OSHA	Occupational Safety and Health Administration
PARC	Park, Arts, River & Connectivity Improvements
Pb	Lead
PB	Parking
PCB	Polychlorinated Biphenyls
PEA	Preliminary Endangerment Assessment
PF	Public Facilities
PFC	Perfluorocarbons
PM	Particulate Matter
PM_{10}	Particulate Matter
$PM_{2.5}$	Fine Particulate Matter
ppb	parts per billion
ppm	Parts per million
ppv	peak particle velocity
PRC	Public Resources Code
PROC	Industrial Process Supply
RAP	Department of Recreation and Parks
RAP	Recreation and Parks
RAS	Residential Accessory Services
RBC	Risk-Based Concentration
RCP&G	Regional Comprehensive Plan & guide
RCRA	Resource Conservation and Recovery Act
RHNA	Regional Housing Needs Assessment
RIO	River Improvement Overlay
River	Los Angeles River
ROG	Reactive Organic Gases
ROW	Right of Way
RSO	Rent Stabilization Ordinance
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RW	Residential Waterways
RWQCB	Regional Water Quality Control Boards
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments

SCAQMD	South Coast Air Quality Management District
SCRAA	Southern California Regional Rail Authority
SCS	Sustainable Communities Strategies
SEL	Sound-exposure level
SEL	Single Event Level
SF_6	Sulfur Hexafluoride
SGMA	Sustainable Groundwater Management Act
SIP	Statewide Implementation Plan
SLCP	Short-lived Climate Pollutants
SLCP Strategy	Short-Lived Climate Pollutant Reduction Strategy
SMU	Site Mitigation Units
SO_2	Sulfur Dioxide
$SO_4(2-)$	Sulfates
SOC	Statement of Overriding Consideration
SoCalGas	Southern California Gas Company
SOHP	State Office of Historic Preservation
SO_x	Sulfur Oxide
SR 60	State Route 60
STLC	Soluble Lad Concentrations
Subbasin	Central Subbasin
SUSMP	Standard Urban Mitigation Plan
SVE	Soil Vapor Extraction
SVP	Society of Vertebrate Paleontology
SWP	State water project
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAG	Transportation Assessment Guidelines
TAC	Toxic Air Contaminants
TCE	Temporary Construction Easement
TCLP	Leachable Lead Concentrations
TLRW	Transmission Right of Way
TMDL	Total Maximum Daily Loads
TOG	Total Organic Gases
TPH	Total Petroleum Hydrocarbons
TPH-DRO	Total Petroleum Hydrocarbons, Diesel Range Organics
TSCA	Toxic Substances Control Act
U.S.	United States
U.S. 101	United States Highway 101
U.S. EPA	United States Environmental Protection Agency
UFP	Ultrafine Particles

UP	Union Pacific
UP LATC	Union Pacific Los Angeles Transportation Center
UPRR	Union Pacific Railroad
USACE	United States Army Corps of Engineers
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VdB	Velocity Decibel
VHT	Vehicle Hours Traveled
VIA	Visual Impact Assessment
Viaduct	Sixth Street Viaduct
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound
WARM	Warm Freshwater Habitat
WDR	Water Discharge Requirements
WER	Water Effect Ratio
WILD	Wildlife Habitat
WQBELs	Water Quality-Based Effluent Limitation
ZAI	Zoning Administrator's Interpretation
$\mu g/m^3$	microgram per cubic meter