



2.0 PROJECT DESCRIPTION

2.1 PROJECT LOCATION

Regionally, the project site is located within the southwestern portion of the City of Long Beach (City), within the County of Los Angeles (County); refer to [Exhibit 2-1, Regional Map](#). Locally, the project site is situated along the east and west sides of the Los Angeles (LA) River, and generally extends a distance of approximately 8 miles from State Route 91 (SR-91) to the north to approximately 0.1-mile south of Ocean Boulevard to the south; refer to [Exhibit 2-2, Site Vicinity Map](#).

2.2 ENVIRONMENTAL SETTING

REGIONAL SETTING

As noted above, the proposed project site is situated along the east and west sides of the LA River. Facilities along the east side of the river are dispersed along an 8 mile corridor from SR-91 on the north, to just south of Ocean Boulevard. Facilities proposed to the west of the river are limited to smaller areas, with one area immediately north of SR-91, west of Interstate 710 (I-710), and east of Long Beach Boulevard, and another area immediately west of I-710, at and along the Long Beach Boulevard bridge over I-710 and the LA River. Generally, the project site and surrounding areas are heavily urbanized and occupied by a range of different land uses.

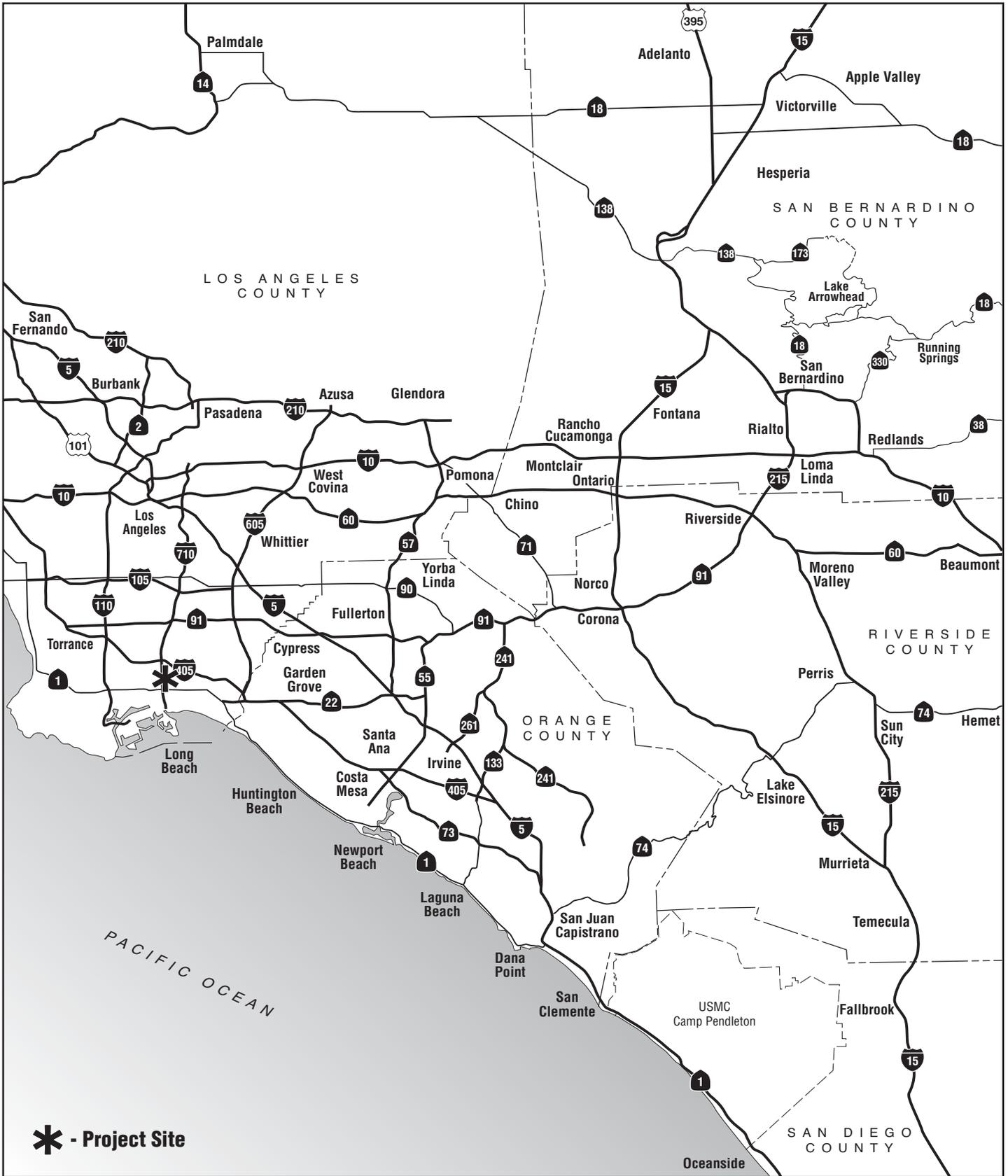
The proposed project includes facilities intended to improve water quality associated with urban runoff in the project area, which ultimately flows into the LA River. The project includes two primary project components: 1) the municipal urban stormwater treatment (MUST) facility; and 2) conveyance facilities/diversion structures to carry urban runoff to the MUST facility for treatment. A detailed description of the proposed project is provided in [Section 2.5, Project Characteristics](#); a description of the existing environmental setting associated with these facilities is provided below. A depiction/overview of the proposed MUST and associated conveyance facilities on a regional basis is provided in [Exhibit 2-3, Project Overview](#).

MUST FACILITY

The MUST facility would be constructed along the east bank of the LA River. The MUST site would occur both north and south of the existing Shoemaker Bridge, on approximately 11.5 acres of vacant City, State, and Southern Pacific Transportation Company owned land. The site is bounded by the river and associated LA River Bicycle Path to the west, Fairbanks Avenue and Shoreline Drive to the east, Cesar E. Chavez Park to the south, Drake Park to the north, and is situated at and adjacent to an existing City pump station (No. SD-01). Currently, the majority of the project site is vacant land/open space with sparse ornamental/non-native vegetation, utility poles, and an advertising/billboard sign. As noted above, City Pump Station No. SD-01 is located within the central portion of the MUST site. The MUST site has been previously disturbed, graded, and the topography is generally flat; refer to [Exhibits 2-4a through 2-4c, Project Components](#), for the MUST facility location.

CONVEYANCE FACILITIES

A range of conveyance facilities, totaling approximately 25,780 feet (approximately 4.88 miles) in length, are proposed to carry urban runoff to the MUST facility. The project would include a combination of the construction of new conveyance facilities (in the form of underground pipelines and open channel facilities), in addition to utilization of existing City pipelines to create the necessary connection between tributary areas in the region and the MUST. Where existing pipelines are incorporated to convey project flows, no improvements, ground disturbance, or other activities would be required (i.e., the existing pipelines would remain in their existing state).



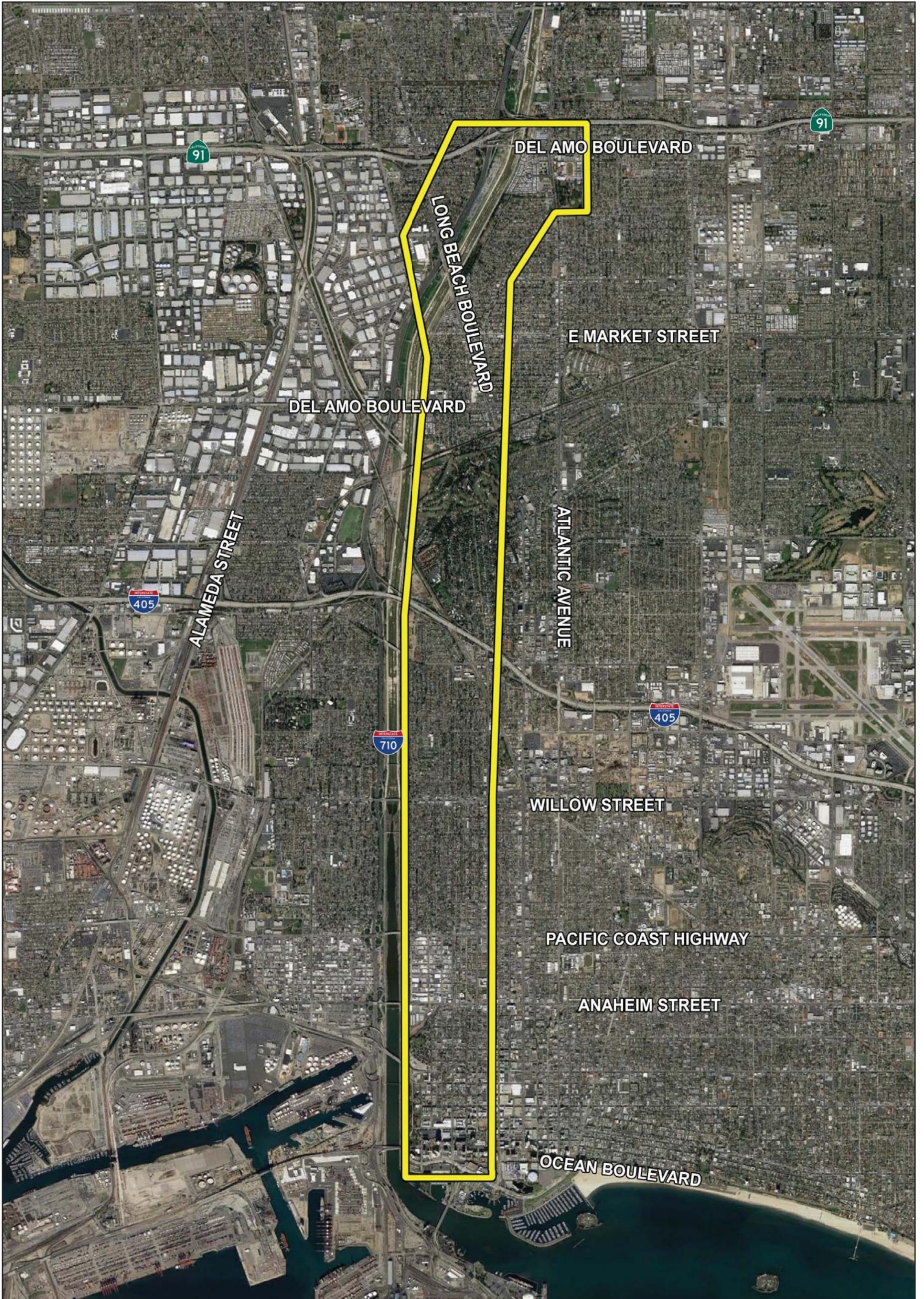
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LONG BEACH MUST PROJECT
INITIAL STUDY / MITIGATED NEGATIVE DECLARATION

Regional Map

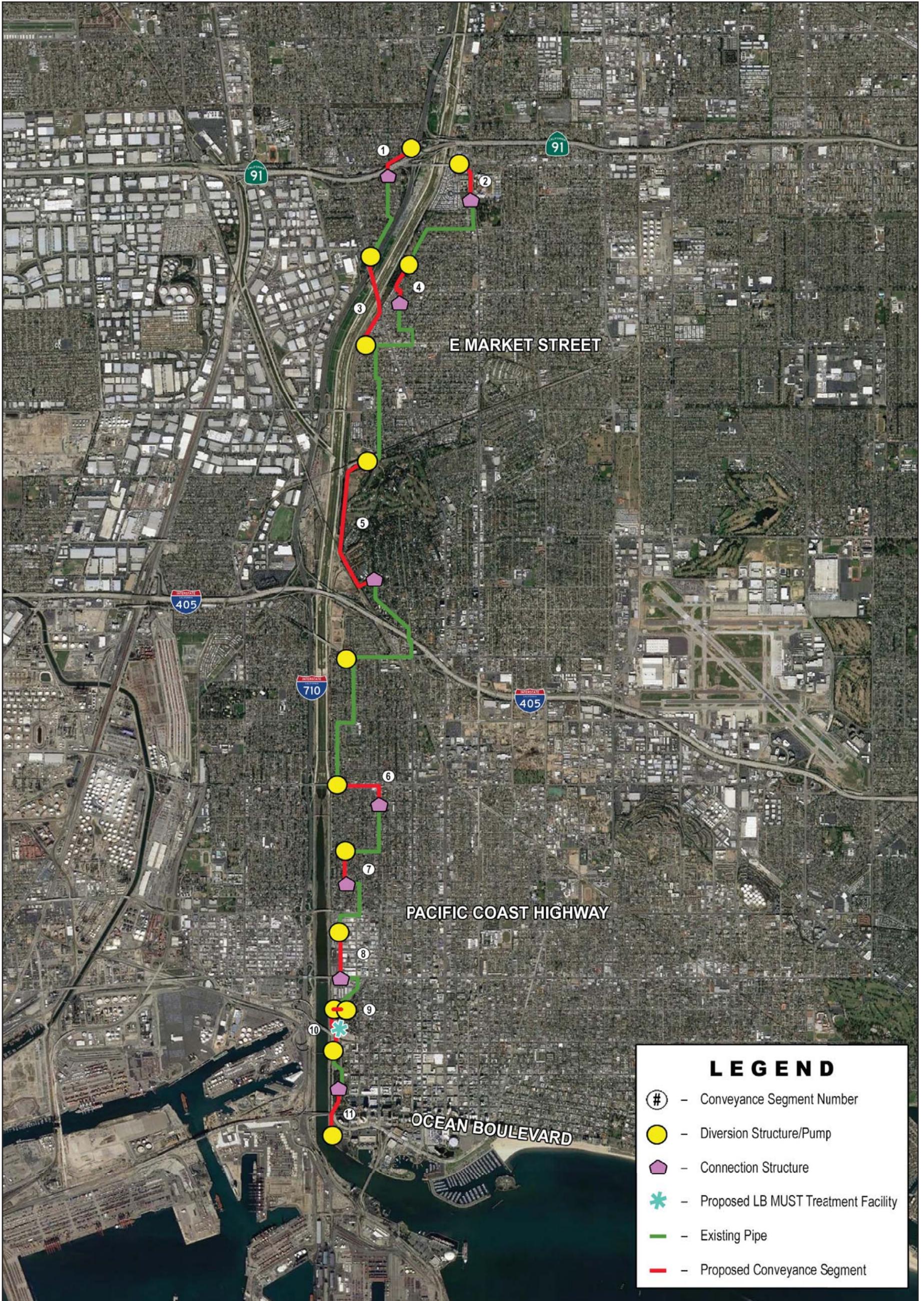


Source: Google Earth, 2017.

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Source: Google Earth, 2017.

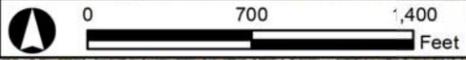
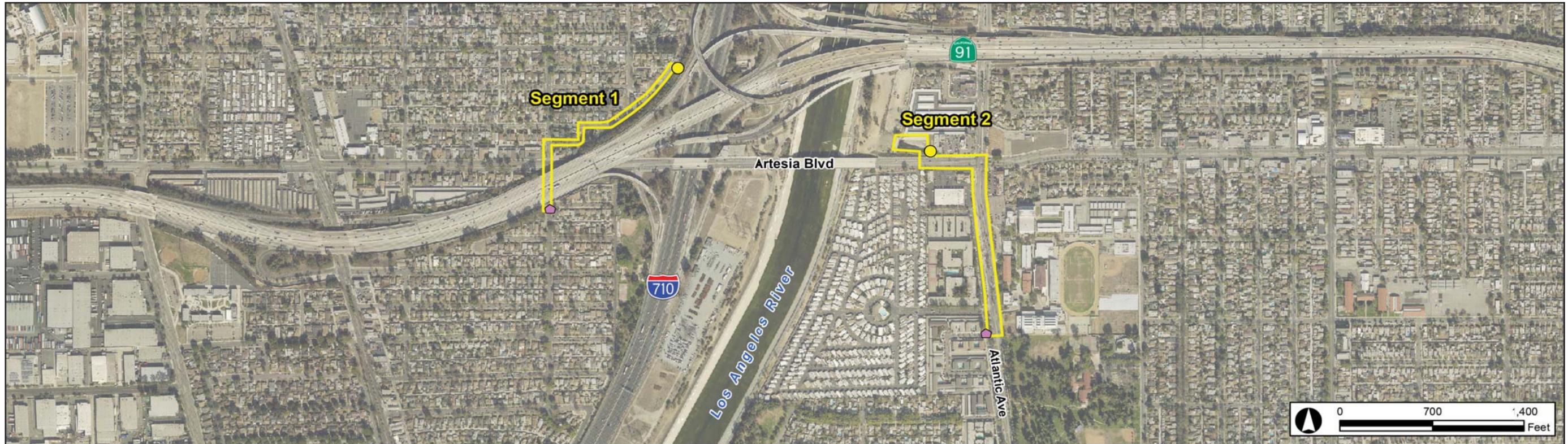
LEGEND

- ① - Conveyance Segment Number
- - Diversion Structure/Pump
- ⬡ - Connection Structure
- ✱ - Proposed LB MUST Treatment Facility
- Existing Pipe
- Proposed Conveyance Segment

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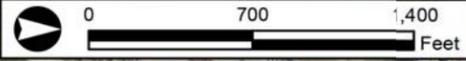


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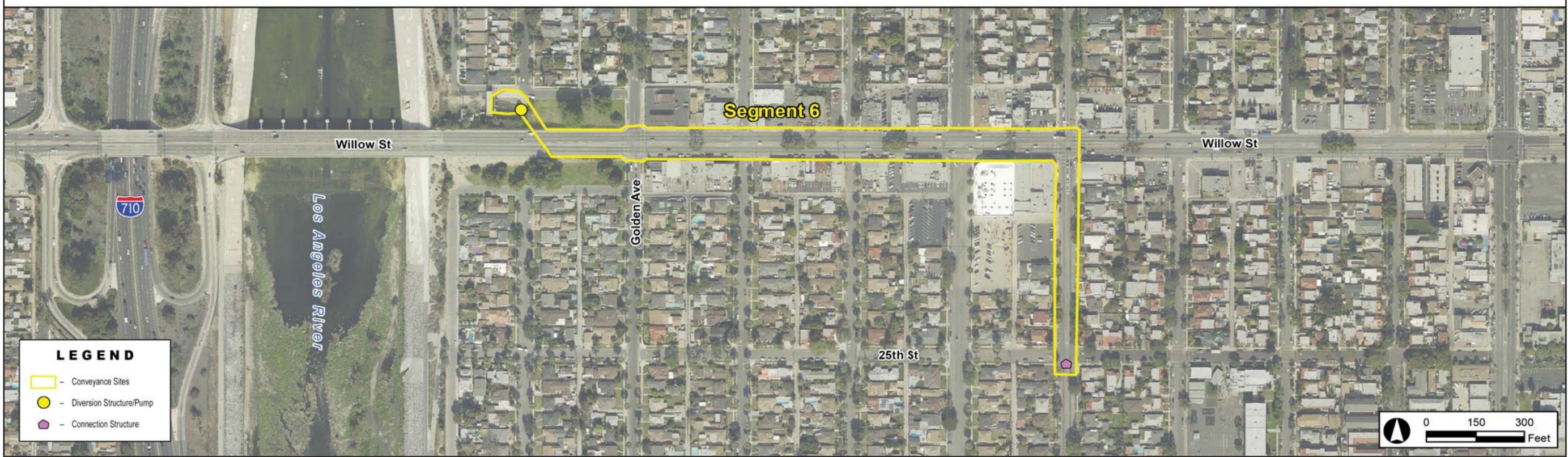
LEGEND

- Conveyance Sites
- - Diversion Structure/Pump
- ◆ - Connection Structure



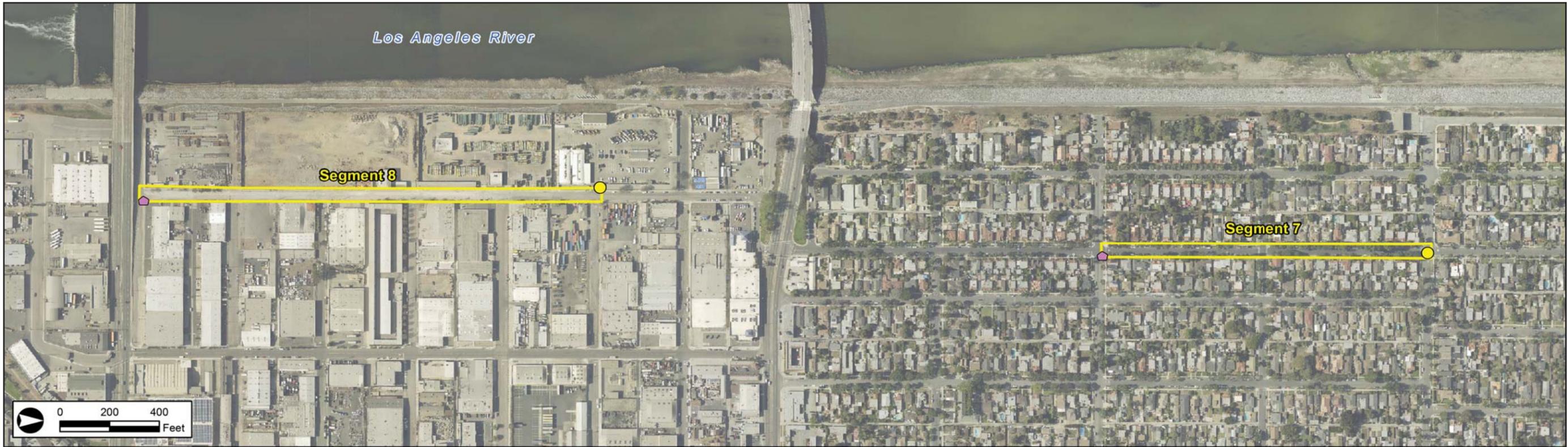


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The project includes a total of 11 non-contiguous segments of proposed conveyance improvements. The existing setting for these 11 proposed segments is provided below, and their locations are depicted in [Exhibits 2-4a](#) through [2-4c](#).

- **Segment 1:** Segment 1, the most northerly of the conveyance segments, runs along Coachella Avenue (approximately 150 feet south of East 67th Way) to the north and continues in a southwest direction along East Maker Street, Artesia Lane, and Butler Avenue, terminating at Butler Avenue and East Coolidge Street. Coachella Avenue, East Maker Street, Artesia Lane, and Butler Avenue are two lane roadways with limited striping located within a residential area. This approximately 1,650 foot long conveyance segment would occur entirely within existing City roadway right-of-way (ROW).
- **Segment 2:** At its northerly terminus, Segment 2 begins at the City's No. SD-12 Pump Station facility located north of East Artesia Boulevard. The proposed conveyance segment would head east on East Artesia Boulevard, and then in a southerly direction along Atlantic Avenue, terminating approximately 140 feet south of Aloha Drive. East Artesia Boulevard and Atlantic Avenue are four lane roadways with Class II Bike Lanes and raised center medians. This approximately 1,750 foot long conveyance segment would occur entirely within existing City roadway ROW.
- **Segment 3:** At its northerly terminus, Segment 3 begins at the City's No. SD-11 Pump Station facility (parcel owned by HB LLC), located south of East Gordon Street, and runs approximately 0.5-mile in a southerly direction along Long Beach Boulevard and its associated bridge over I-710 and the LA River. At the southerly terminus of the Long Beach Boulevard bridge, the alignment would proceed in a southwesterly direction within vacant Los Angeles County Flood Control District property and City ROW, until it would turn in an easterly direction along West Market Street, to where it terminates at West Market Street and North Pacific Avenue. Long Beach Boulevard is generally a four lane roadway with a raised center median. West Market Street is a two lane roadway located within a residential area. This segment is approximately 4,500 feet long.
- **Segment 4:** At its northerly terminus, Segment 4 begins approximately 135 feet south of East Osgood Street along De Forest Avenue, heading in a southerly direction until it turns into Chestnut Avenue, and ends at Chestnut Avenue and Jaymills Avenue. De Forest Avenue/Chestnut Avenue are two lane roadways located within a residential area. This approximately 1,660 foot long segment would occur entirely within City roadway ROW.
- **Segment 5:** At its northerly terminus, Segment 5 begins approximately 525 feet west of West 47th Street and extends in a southwesterly direction, parallel to existing railroad ROW and north of the Virginia Country Club (this portion of Segment 5 would be within private property owned by the Virginia Country Club and public ROW including land owned by the City and Los Angeles County Flood Control District). The alignment then proceeds in a southerly direction along the easterly side of the LA River, within existing public ROW (Los Angeles County Flood Control District). This segment would continue south within Los Angeles County Metropolitan Transportation Authority (LACMTA) ROW, parallel to Virginia Vista Court, and within Del Mar Avenue until it turns in a northeast direction within West San Antonio Drive and ends at the intersection of West San Antonio Drive and Country Club Drive. Del Mar Avenue and West San Antonio Drive are two lane roadways located within a residential area. This segment would be approximately 6,440 feet long.
- **Segment 6:** Segment 6 begins at the City's No. SD-06 Pump Station facility located north of West Willow Street and travels east along West Willow Street to Magnolia Avenue. At Magnolia Avenue, Segment 6 extends south and terminates at the intersection of Magnolia Avenue and West 25th Street. West Willow Street is a four lane roadway with street parking and a raised center median. Magnolia Avenue is a two lane roadway with a striped center median. This approximately 2,300 foot long conveyance segment would occur entirely within existing City ROW.



- Segment 7: Segment 7 extends along Golden Avenue in a north to south direction from West Hill Street on the north to West 20th Street on the south. Golden Avenue is a two lane roadway located within a residential area. This approximately 1,300 foot long conveyance segment would occur entirely within existing City ROW.
- Segment 8: Segment 8 extends along San Francisco Avenue in a north to south direction from West 17th Street on the north to Anaheim Street on the south. San Francisco Avenue is a two lane roadway located within an industrial area. This approximately 1,850 foot long conveyance segment would occur entirely within existing City ROW.
- Segment 9: Segment 9 begins at the City's No. LA-2 Pump Station and extends in an easterly direction across City-owned vacant land and ends at Loma Vista Drive. Loma Vista Drive is an unstriped two lane roadway in a residential area. This segment is approximately 480 feet long.
- Segment 10: Segment 10 begins at the City's No. LA-2 Pump Station and extends in a southerly direction along Fairbanks Avenue to the MUST facility. Within this approximately 1,800 foot long segment, Fairbanks Avenue is a two lane roadway with no striping. Segment 10 would occur within State, City, Los Angeles County Flood Control District ROW, as well as property owned by Southern Pacific Transportation Company.
- Segment 11: Segment 11 represents the most southerly of the conveyance segments. It begins at the southern boundary of the MUST facility project site, approximately 820 feet south of the City's Pump Station No. SD-01. This segment travels in a southerly direction, within the green belt located west of West Shoreline Drive. Segment 11 extends southerly beneath West Ocean Boulevard and parallel to the LA River Bicycle Path and terminates at the City's No. LA-01 Pump Station located at the Golden Shore RV Resort (located at 101 Golden Shore). This segment is approximately 2,655 feet long and occurs within City and Los Angeles County Flood Control District ROW, as well as property owned by South Pacific Transportation Company and Union Pacific Rail Road.

SURROUNDING USES

MUST Facility

Land uses surrounding the proposed MUST site include vacant land/open space to the north, commercial land uses to the east, West Shoreline Drive and Cesar E. Chavez Park to the south, and the LA River and associated bicycle path to the west.

Conveyance Facilities

Land uses surrounding each of the proposed conveyance segments consist of:

- Segment 1: Residential, transportation, and open space land uses.
- Segment 2: Transportation, commercial, vacant, residential, institutional, and recreational land uses.
- Segment 3: Transportation, residential, commercial, open space, and water land uses.
- Segment 4: Transportation, residential, open space, and recreational land uses.
- Segment 5: Transportation, residential, recreational, institutional, and water land uses.
- Segment 6: Transportation, residential, open space, and commercial land uses.
- Segment 7: Transportation and residential land uses.
- Segment 8: Industrial and commercial land uses.
- Segment 9: Open space, recreational, residential, transportation, and industrial land uses.
- Segment 10: Open space, vacant, recreational, residential, transportation, industrial, and commercial land uses.
- Segment 11: Open space, recreational, transportation, and commercial land uses.



2.3 EXISTING GENERAL PLAN AND ZONING

MUST FACILITY

According to the *City of Long Beach General Plan (General Plan) Land Use Map*, the project site is designated as "LUD 9R; Restricted Industry," "LUD 11; Open Space/Parks," and "LUD 7; Mixed Use." According to the *General Plan Land Use Element*, the Restricted Industry land use "is intended to attract and maintain businesses which conduct industrial or manufacturing operations primarily indoors, with limited outdoor appurtenant activities." The Open Space land use designation includes parks, plazas, promenades and boardwalks, vacant lots, cemeteries, community gardens, golf courses, beaches, flood control channels and basins, rivers and river levees, utility rights-of-way (e.g. transmission tower areas), oil drilling sites, median strips and back up lots, offshore islands, marinas, inland bodies of water, the ocean, estuaries and lagoons. The Mixed Use land designation is intended to be "a careful blending of different types of land uses (designed to) save time and energy in transportation and communications, simplify and shorten transactions of goods and services, vitalize a site, and give it more importance in the urban structure of the City." According to the *General Plan*, the uses intended by this district are employment centers, such as retail, offices, medical facilities; higher density residences; visitor-serving facilities; personal and professional services; or recreational facilities. Surrounding areas to the project site are designated "LUD 4; High Density Residential," "LUD 7; Mixed Uses," and "LUD 11; Open Space/Parks" by the Land Use Map.

The *City of Long Beach Zoning Map* zones the project site as "IL; Light Industrial," "PD-21, Planned Development, Queensway Bay," and "PD-30, Planned Development, Downtown Long Beach." Based on the *City of Long Beach Municipal Code (LBMC)*, Light Industrial zoning "allows a wide range of industries whose primary operations occur entirely within enclosed structures and which pose limited potential for environmental impacts on neighboring uses." The Queensway Bay Planned Development Plan provides a flexible planning mechanism that allows mixed-use development to be built incrementally over time that is consistent with the intent of the Legislative grants of tide and submerged lands to the City of Long Beach and with the Port's Master Plan. The Downtown Long Beach Planned Development Plan is based on "form-base code," which changes the focus from traditional regulation characterized by a list of permitted uses to the design and character of the buildings and how they contribute to defining and activating the nearby public realm. The Plan includes the following topics: vision, connectivity and character, development standards, design standards, streetscape and public realm standards, sign standards, historic preservation, and plan administration.

Surrounding areas to the project site are zoned "PD-10; Planned Development, Wilmore City," "PD-21; Planned Development, Queensway Bay," and "PD-30; Planned Development, Downtown Long Beach."

CONVEYANCE FACILITIES

Given the wide geographical area spanned by the conveyance facilities, the proposed conveyance segments traverse a wide range of *General Plan* land use designations and *LBMC* zoning designations. [Table 2-1, Conveyance Facilities – General Plan Land Use and Zoning Designations](#), provides a summary of the existing land use designations and zoning for the conveyance facilities.

2.4 PROJECT BACKGROUND

The City of Long Beach is situated at the confluence of the LA River. Currently, substantial quantities of pollutants (metals, bacteria, hydrocarbons, pesticides, and trash) enter the LA River via urban runoff and accumulate in the Long Beach Harbor. Runoff includes water draining from urban uses such as streets, parking lots, driveways, and lawns which flows through the storm drain system. Pollutants from residential, industrial, and other urban activities continue to impair the water quality of the river and the Long Beach Harbor.



Table 2-1
Conveyance Facilities – General Plan Land Use and Zoning Designations

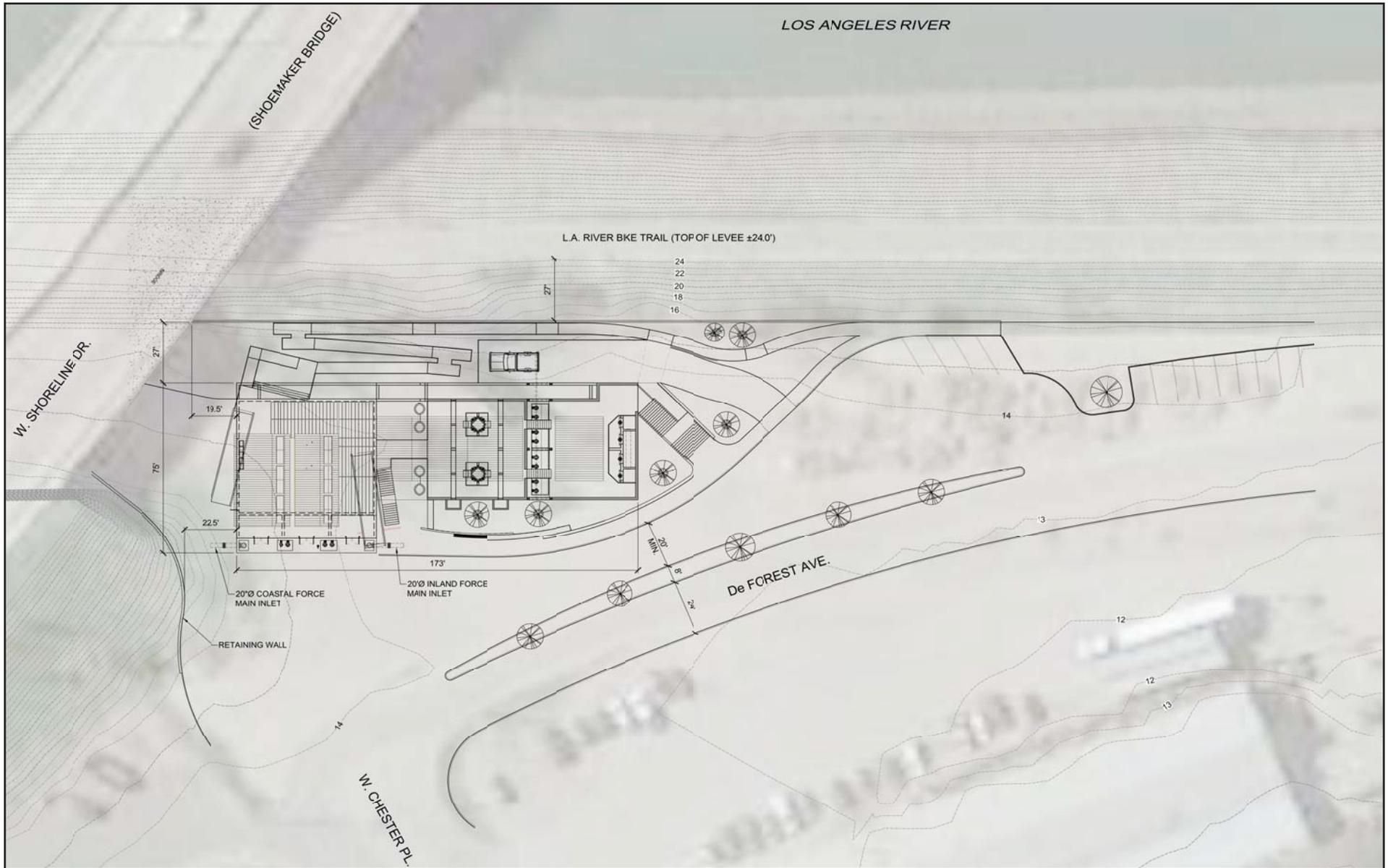
General Plan Land Use		Zoning			
1	Single Family	CCA	Community Commercial Automobile-Oriented	R-2-N	Two-Family Residential, Standard Lot
2	Mixed Style Homes	CNA	Neighborhood Commercial Automobile-Oriented	R-4-N	Medium-Density Multiple Residential
3A	Townhomes	I	Institutional	RM	Mobile Homes, Modular and Manufactured Residential
4	High Density Residential	IG	General Industrial	R-4-R	Moderate-Density Multiple Residential
7	Mixed Use	IL	Light Industrial		
8A	Traditional Retail Strip Commercial	P	Park		
8N	Shopping Nodes	PD-6 (2)	Planned Development, Downtown Shoreline		
9G	General Industry	PD-10	Planned Development, Wilmore City		
9R	Restricted Industry	PD-30	Planned Development, Downtown Long Beach		
10	Institutions/Schools	PR	Public Right-of-Way		
11	Open Space/Parks	R-1-L	Single-Family Residential, Large Lot		
13	Right-of-Way	R-1-N	Single-Family Residential, Standard Lot		

After taking these factors into consideration, the City has proposed the MUST Project. The MUST facility would divert and treat urban runoff from tributary areas in the project area that would otherwise discharge into the LA River. The proposed MUST facility would provide a solution to meeting clean water mandates, as required under the National Pollutant Discharge Elimination System (NPDES) Permits, as well as under the LA River Total Maximum Daily Load (TMDL) requirements, which are overseen by the Los Angeles Regional Water Quality Control Board (RWQCB), State Water Resources Control Board (SWRCB), and the U.S. Environmental Protection Agency (USEPA) under the Clean Water Act. The project would also result in the creation of approximately five acres of wetland/riparian habitat, utilizing grant funding provided by the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy (RMC).

2.5 PROJECT CHARACTERISTICS

MUST FACILITY

As noted above, the proposed MUST facility would be constructed along the east bank of the LA River on an approximately 11.5-acre site near the existing Shoemaker Bridge and City Pump Station No. SD-01. The MUST would receive 100 percent of non-stormwater runoff and a portion of “first flush” flows during a storm event. The primary components of the proposed MUST facility would include: 1) pretreatment wetlands; 2) the treatment facility; and 3) a storage/polishing pond. These facilities are described in greater detail below, and a concept plan is depicted in [Exhibit 2-5, MUST Facility Concept Plan](#). It is anticipated that two shifts of three operators would be employed Monday through Friday and two shifts of two operators would be employed Saturday and Sunday. It should be noted that the MUST facility and its proposed water features (i.e., pretreatment wetlands and storage pond) may become an integrated component of an expansion/improvement of Cesar E. Chavez Park (a separate project under development by the City’s Parks, Recreation, and Marine Department). The City is currently reviewing concepts to integrate existing and potential uses at and surrounding the park, to consolidate and unify different components into a compatible plan.



Source: Koa Consulting; June 9, 2017.

NOT TO SCALE



LONG BEACH MUST PROJECT
 INITIAL STUDY / MITIGATED NEGATIVE DECLARATION
MUST Facility Concept Plan

Exhibit 2-5



Pretreatment Wetlands

The proposed MUST facility would include a terminal wetland treatment process that would remove nutrients, total suspended solids (TSS), and particulates prior to entering the treatment plant. Pollutants would be removed via natural biological, physical, and chemical means as they travel through the wetland to the treatment plant. Flows would enter the pretreatment wetlands via a distribution outfall into a forebay, travel through wetland vegetation/soils and open water areas, and ultimately be conveyed to the treatment facility. The pretreatment wetlands would also serve as a park/water feature amenity, resulting in an improvement in recreational opportunities and aesthetics in the project area. Direct contact with the pretreatment wetlands (e.g., bathing, swimming, etc.) would be prohibited.

Treatment Facility

From the pretreatment wetlands, the water would be conveyed to a centralized mechanical treatment facility for water treatment that utilizes physical, biological, and chemical principles to remove contaminants from the water to achieve compliance with Total Maximum Daily Loads (TMDLs). The treatment plant would be designed to intake the 2.0 million gallons per day (MGD) or 1,400 gallons per minute (gpm) flows and process them at the treatment facility as follows:

1. Turbidity I – debris removal;
2. Turbidity II – fine suspended solids removal;
3. Oxidation I – trace contaminants removal;
4. Oxidation II = dissolved organics removal;
5. Oxidation III– dissolved nutrients removal;
6. Turbidity III – bio sludge/finn removal;
7. Disinfection/Post Oxidation; and
8. Mineral Removal.

By processing the waste water streams through these steps, the project treatment goals will be obtained including clear, clean water with low organics, nutrients, heavy metals, and pathogens. The treatment facility would use a proposed treatment train process with bar racks and chopper pumps within the upstream diversion systems, successive strainers at the upstream end of the treatment facility, ozone/peroxide advanced oxidation, coagulant addition for phosphorus removal if required, biologically activated carbon filtration, and final recycled water storage and chlorine disinfection.

The majority of process equipment associated with the treatment facility would be enclosed within a multi-level, 30-foot high, 10,000 square-foot building. The proposed building and associated facilities would include contemporary architectural features, and would include both landscape and hardscape improvements. Parking would be provided on-site within the northern portion of the facility for employees and visitors, with access to the facility provided via Fairbanks Avenue.

The MUST facility would be open to visitors and for educational tours/opportunities for the public to gain an understanding of the environmental benefits of the project and importance of maintaining water quality within the project area. As such, public viewing/gathering areas, seating, and shade structures would be provided; refer to [Exhibit 2-6, *Conceptual MUST Facility Renderings*](#). In addition, the MUST facility would include restroom facilities that would be open to the public from 8:00 a.m. to 5:00 p.m.

Storage Pond

The MUST facility would include a storage/polishing pond, which would represent the final step in the treatment process prior to discharge into the LA River. The storage pond would include additional pollutant removal via biofiltration, aeration, wetlands, and the addition of aluminum for polishing. The storage pond would also serve as a park/water feature amenity, resulting in an improvement in recreational opportunities and aesthetics in the project area. Direct contact with the storage pond (e.g., bathing, swimming, etc.) would be prohibited.



Aerial view looking south.



Southwesterly view of main stairs.



Southwesterly view of main entry.



Northwesterly view from the Los Angeles River levee.



As a potential future option associated with the proposed project, treated water from the MUST facility may be utilized as recycled water for non-potable uses. The use of the MUST facility to provide recycled water would fulfill a need for a recycled water source in the western portion of the City. Additional conveyance/distribution facilities would be required for this to occur; any such improvements would occur as part of a separate project analyzed in a stand-alone environmental document, and are not analyzed herein.

CONVEYANCE FACILITIES

The proposed project would include underground conveyance facilities that would divert existing urban runoff from discharge points along the LA River, within the approximately 19-square mile watershed, and convey them to the MUST facility for treatment. Section 2.2, *Environmental Setting*, above provides a description of the location of each of the proposed segments of new conveyance facilities. The conveyance facilities would connect a number of proposed diversion structures/pumps and connection structures that would be required to convey urban runoff to the MUST facility. A description of the conveyance facilities proposed as part of the project is provided below.

Diversion Structures/Pumps

A number of proposed diversion structures/pumps would be required to divert urban runoff from existing outfalls to the LA River, and redirect them to the MUST facility. The proposed diversion structures would be constructed entirely underground. Primary components would include a sump/grit chamber with submersible 10 horsepower pump, presettling/sedimentation storage, manholes, and access facilities such as manhole covers and ladders. The dimensions of each diversion structure/pump facility would approximately 15 feet by 15 feet by 20 feet deep. Refer to Exhibit 2-4a through 2-4c, for a depiction of the location of proposed diversion structures/pumps.

Conveyance Pipelines/Channels

As noted above, a total of 11 segments of conveyance facilities would be required for the project. The location of all proposed conveyance facilities is shown in Exhibit 2-4a through 2-4c. The majority of conveyance segments would be constructed entirely underground as 4-inch to 12-inch high density polyethylene (HDPE) pipelines within existing City roadway ROW or easements, and installed via open cut trenching. However, a number of segments (or portions thereof) may be constructed as open channel facilities with pocket wetlands/ponds, providing several benefits including biofiltration, pretreatment, and recreational/aesthetic enhancements in the site vicinity. Open channel segments would generally be a vegetated channel with the naturalized appearance of a meandering stream system, with accompanying elements such as rock riffles, pools, and cobbled areas with an irregular cross section.

2.5.1 PHASING AND CONSTRUCTION

Construction of the project is anticipated to occur in two phases, commencing in 2018 and concluding in 2021. The first phase would include construction of the MUST facility and the conveyance facilities south of SR-91. Construction of the first phase would take approximately two years. The second phase would include construction of the conveyance facilities north of SR-91. Construction activities for the second phase are anticipated to take two years to complete.

2.6 PERMITS AND APPROVALS

The proposed project would require permits and approvals from the City of Long Beach and other agencies prior to construction. These permits and approvals are described below, and may change as the project entitlement process proceeds.



City of Long Beach

- California Environmental Quality Act Clearance
- Site Plan Review
- Building Permit
- Local Coastal Development Permit (limited to project components in the Coastal Zone)
- Los Angeles County Flood Control District (approval for connections to existing pump stations)

Los Angeles Regional Water Quality Control Board

- NPDES Construction General Permit



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